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## *Original Articles*

### THE PATHOLOGY OF INTESTINAL AMEBIASIS.*


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In former papers, one of us (Musgrave) has dealt with the subjects of the cultivation of amebas, and the etiology, diagnosis, prognosis and treatment of intestinal amebiasis. To complete the series, there remained, then, the pathology, complications and sequelæ, and to the pathology of the intestinal amebic disease the following remarks will be limited.

It may be well to state at the outset that we can see no valid reason for departing from the nomenclature of Lösch. He described a *pathogenic* ameba from a diseased intestine and called it *Amœba coli.* Why this term should be applied to a supposititious non-pathogenic organism is difficult to say. We shall, in referring to the cause of intestinal amebiasis, use the name introduced by Lösch.

Among the many articles in the literature of amebiasis, there are but few which are of special value from the pathologic side. Chief among these are those of Councilman and Lafleur,[1] Harris,[2] Howard,[3] and Rogers.[4] Taken together, these works give a very complete picture of the disease as we have seen it.

The material has been obtained from various sources, among which have been the First Reserve Hospital (the records of Strong and Musgrave), Bilibid Prison and the Civil Hospital, all in Manila. Other material has been obtained from the private practices of Drs. McDill and Musgrave, also in Manila.

#### METHODS.

Bits of tissue from autopsies were fixed in Zenker's solution, in absolute alcohol, Flemming's solution, and Kaiserling, and ultimately imbedded in paraffin.

Sections from alcohol tissues were stained by Mallory's thionin and oxalic method, those from Flemming's solution in safranin and safranin-picro-indigo-carmin, those from Zenker's in Magenta-picro-indigo-carmin (Borrel), Gentian-violet-picro-indigo-carmin, eosin-methylene-blue, eosin and toluidin blue, hematoxylin and eosin, hematoxylin and picro-fuchsin (Van Gieson), chlorid of iron hematoxylin (Mallory), and Heidenhain's iron hematoxylin.

After some preliminary staining it was evident that for simple diagnosis of amebas from alcohol tissues, the eosin-toluidin-blue and thionin-oxalic-acid methods were satisfactory in the order given; for others, sublimate or chrome tissues, hematoxylin and eosin were most useful. It was evident, however, that for careful examination and cytologic study the best results could be obtained with Heidenhain's iron hematoxylin and Borrel's stain, or in the case of Flemming's solution sections with safranin-picro-indigo-carmin. Borrel's method may be modified by using gentian violet in the place of magenta with excellent results.

Borrel's staining gives most brilliant results in sublimate tissues producing very clear distinct pictures and only surpassed in clearness and delicacy by Heidenhain's iron hematoxylin. Both of these stains have the additional advantage of showing the bacteria when differentiation is properly carried out.

Hematoxylin and eosin is a very satisfactory routine method for demonstrating the amebas although the contrasts are not so distinct and the finer elements can not be so well demonstrated.

Harris' method, when applied to sections of the intestine, gives a considerable contrast between the amebas and other cells. By its use the organisms are easily found with the lower powers of the microscope.

Kaiserling tissues respond best to hematoxylin and eosin, but are of little comparative value for detail, and have been used almost exclusively to demonstrate the lesions in a gross microscopic way. From such tissues, serial sections have been made of various types of lesions and their form and extent studied in that way.

#### GROSS LESIONS.

Many writers say that the macroscopic lesions of intestinal amebiasis are pathognomonic. While in certain cases—perhaps in the majority—this is true, there are others in which the picture may be very deceptive. We have seen cases from the appearance of which at autopsy we could not say definitely whether or not we were dealing with amebiasis, tuberculosis or some other ulcerative condition. We have seen some cases, few to be sure, in which the majority of the ulcers were not of the classical undermined type, in which the undermining was either incipient or healing was in progress. A truly pathognomonic picture, however, is presented when the mucous membrane shows all the types of lesions, and this is not uncommon, and in which the walls of the gut are thickened and edematous.

The various lesions may not be sharply distinguished, for the process is a progressive one, and one type shades into another very gradually, so that it is for purposes of convenience in description that we shall apply epithets to arbitrary stages of the gross process.

* At the joint meeting of the Section on Pathology and Physiology and the Section on Practice of Medicine at the Fifty-sixth Annual Session, July, 1905, this paper was read in abbreviated form by Dr. Musgrave in connection with the article on Amebiasis which was published in THE JOURNAL Sept. 16, 1905.

1. Johns Hopkins Hosp. Reports, 1891, vol. II, 395.
2. Amer. Jour. Med. Sc., 1898, vol. cxv, 384.
3. Buck's Reference Handbook, 1900.
4. Brit. Med. Journ., 1903, vol. I, 1315.

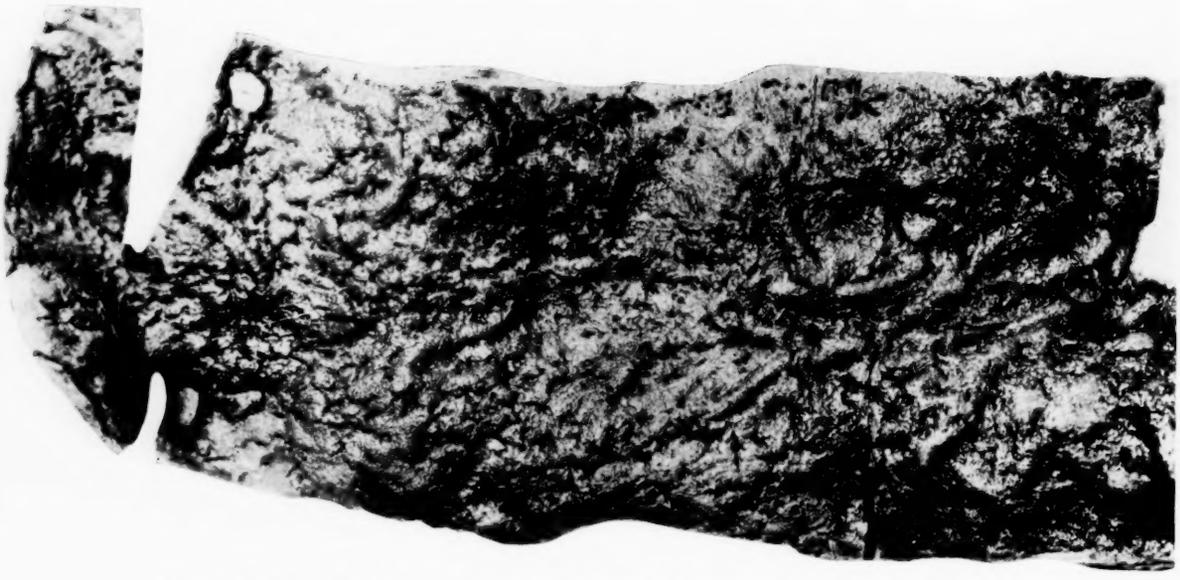

Fig. 1.—Thin-walled gut, with shallow ulcers, some slightly undermined, others punched out.

Fig. 2.—Sigmoid. Irregular ulceration with diphtheritis.

Fig. 3.—Colon. A moderately thickened gut with various types of ulcers.

FIG. 10 — Cecum.
Shows all stages of ulceration.
The smallest red points indicate the positions of preulcerative lesions.

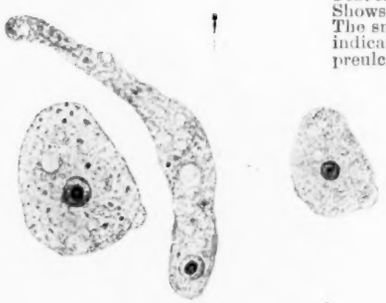

FIG. 27 — Amebas from a culture.
Drawn with Zeiss oil immersion.
1/12, comp. oc. 8.

FIG. 9 — Colon. Earliest lesions.
The specimen had been very much decolorized.

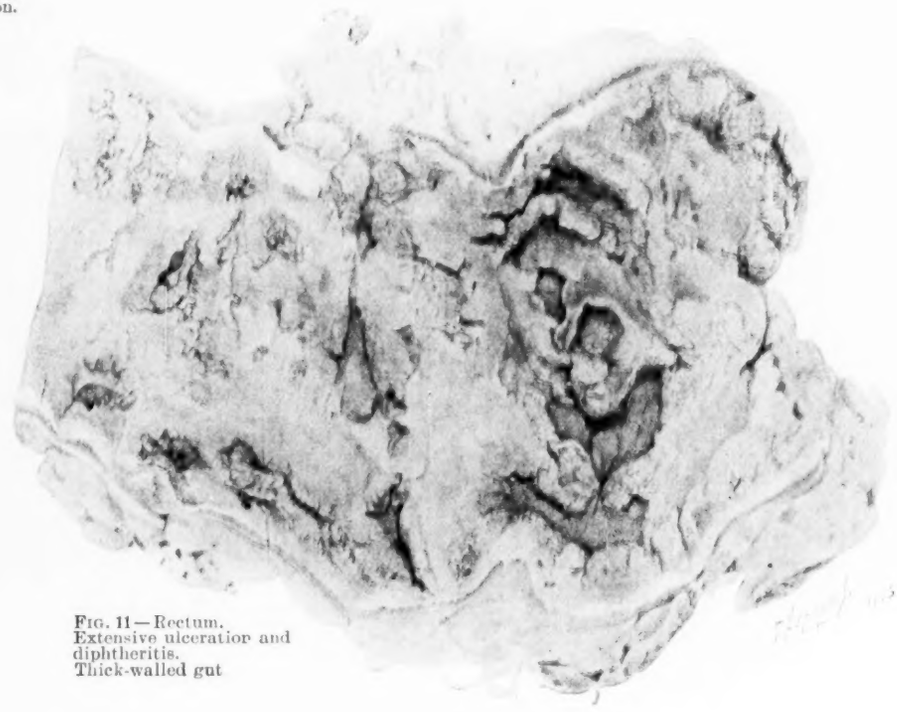

FIG. 11 — Rectum.
Extensive ulceration and diphtheritis.
Thick-walled gut

Fig. 4.—Cecum. Marked degree of disorganization of the bowel with shreds of muscularis and submucosa. Perforation.

Fig. 5.—Rectum. Extensive ulceration and diphtheritis. Thick-walled gut.

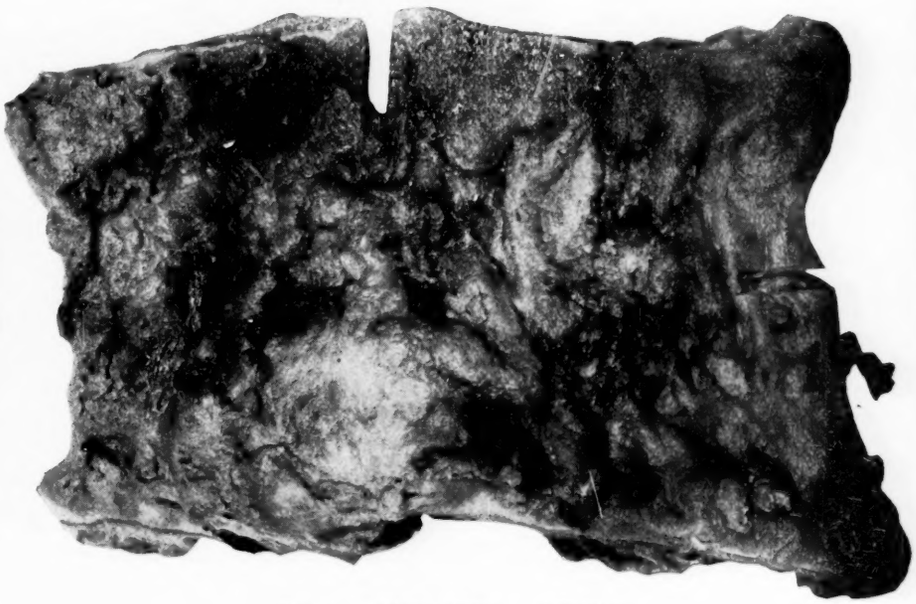

Fig. 6.—Various stages of ulceration.

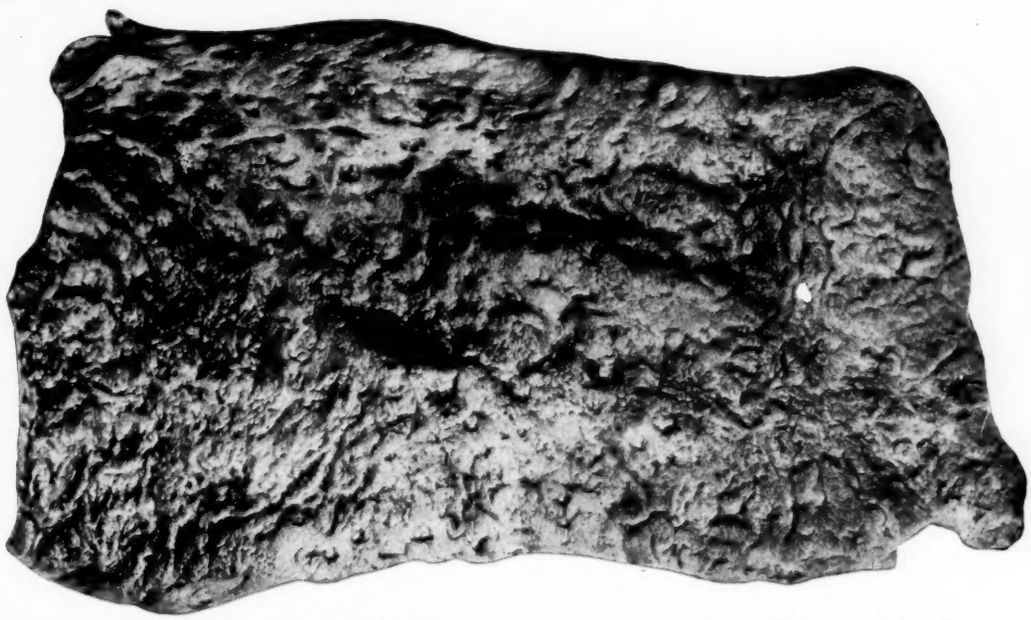

Fig. 7.—Colon. Extensive distribution of punched-out ulcers; some slightly undermined.

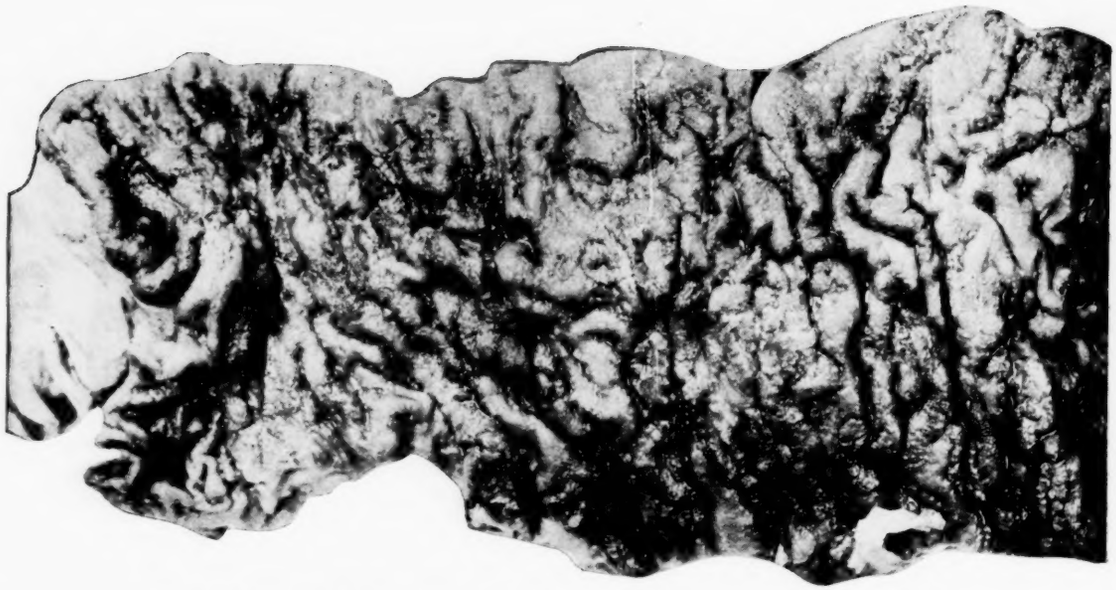

Fig. 8.—Colon. Thickened bowel with some large ulcers and some very early ones.

Fig. 12.—Early intestinal lesion. Shows superficial necrosis, glandular distortion, and round-cell infiltration. Borrel's stain. Zeiss obj. AA, oc. comp. 4, bellows at 30 cm.

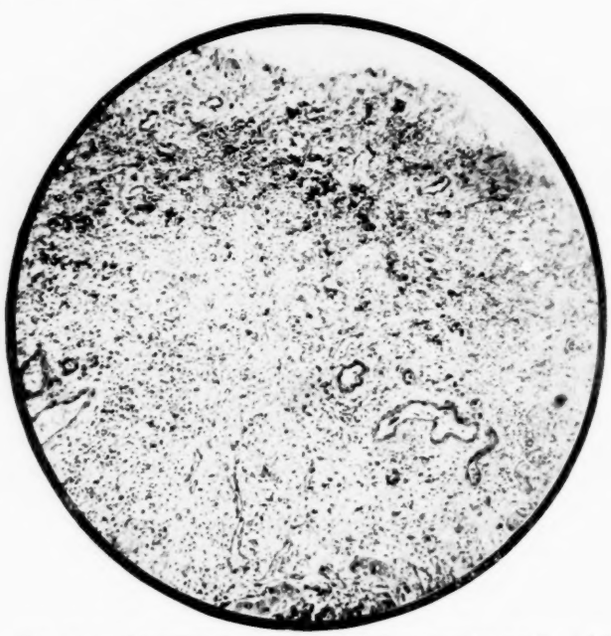

Fig. 14.—Submucosa in an early lesion. Borrell's stain. Zeiss obj. AA, comp. oc. 4, bellows at 30 cm.

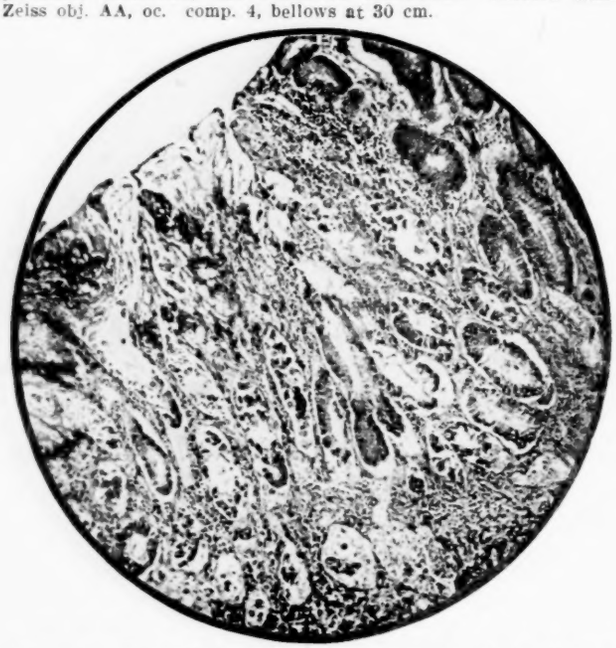

Fig. 13.—Early lesion. Extending necrosis, destruction of glandular epithelium, invasion of amebas, and round-cell infiltration. Borrel's stain. Zeiss obj. AA, comp. oc. 4, bellows at 30 cm.

Fig. 15.—Thrombosis of blood vessels of the mucous membrane of the colon. Borrel's stain. Zeiss obj. DD, comp. oc. 4, bellows at 50 cm.

Fig. 16.—Amebas in the muscularis mucosa. The section is the same as that shown in Fig. 13. x 500.

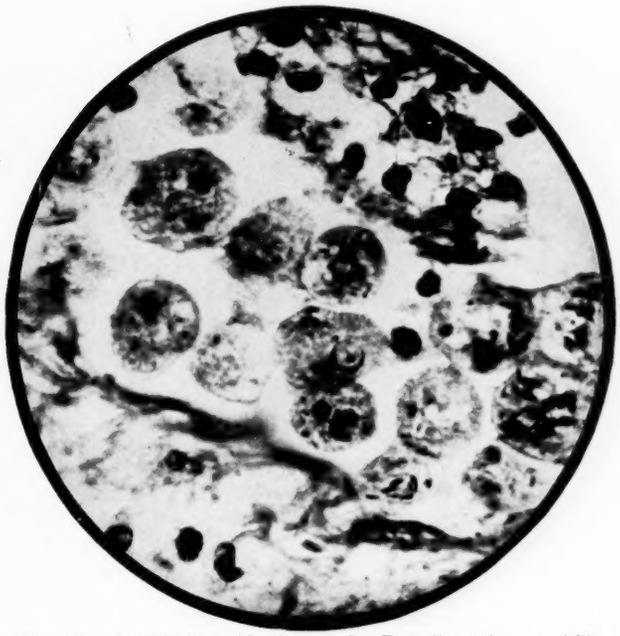

Fig. 19.—Amebas in a blood vessel. Borrel's stain. x 500.

Fig. 17.—Amebas in an area of hemorrhage in the submucosa. Borrel's stain. x 500.

Fig. 20.—Amebas in the lymph spaces of the submucosa. Borrel's stain. x 500.

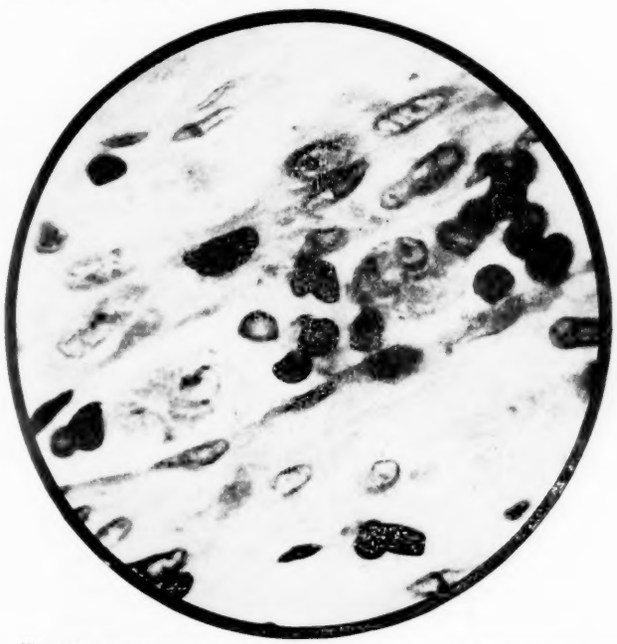

Fig. 18.—Amebas in a blood vessel. x 500. Heidenhain's iron hematoxylin.

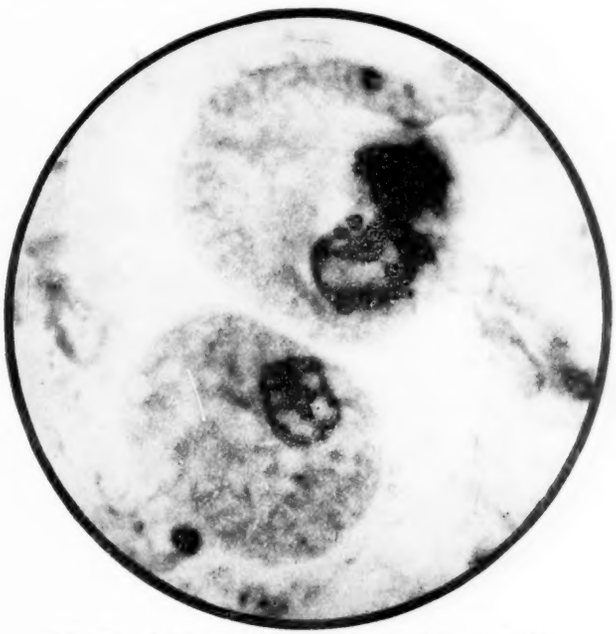

Fig. 21.—Amebas in tissues. Borrel's stain. x 1,400.

Fig. 22.—Amebas in tissues. Borrel's stain. x 1,400.

Fig. 24.—Amebas in tissues. Borrel's stain. x 1,400.

Fig. 23.—Amebas in tissues. Borrel's stain. x 1,400.

Fig. 25.—Amebas from a culture. Impression preparation. Borrel's stain. x 500.

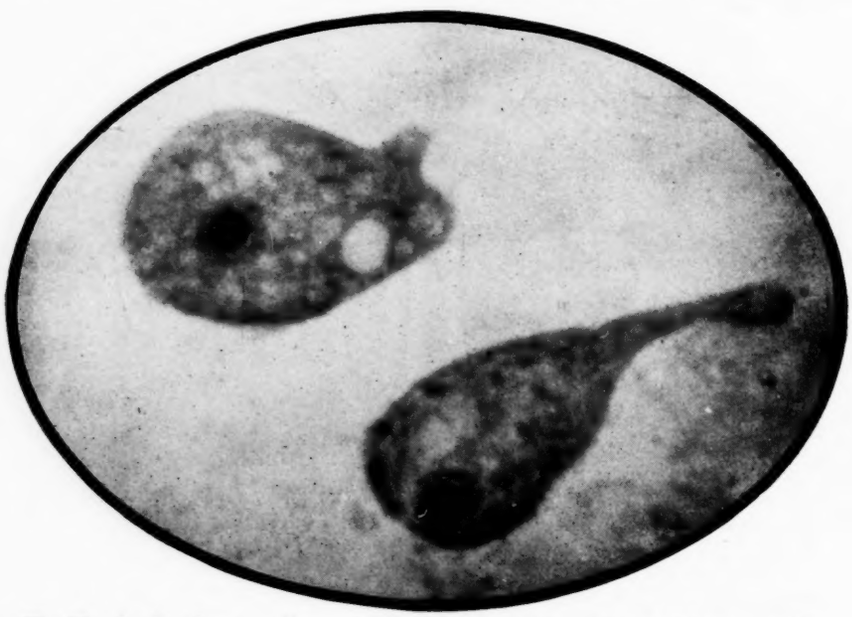

Fig. 26.—Amebas from a culture. Impression preparation. Borrel's stain. x 1,400.

1. *Preulcerative Lesions.*—These are the "small raised dots" of Rogers. They vary in size from 0.5 to 2.0 mm. in diameter and are intensely congested. As a matter of fact, when studied macroscopically, they are seen to be composed of one or more capillary hemorrhages into the intraglandular tissue. Usually associated with this condition is one of erosion of the superficial layers of the mucous membrane. These erosions, however, may be encountered in the absence of any marked congestion, although a moderate injection, at least, is the rule. With both of these processes there is little of the marked thickening of the submucosa that is so constantly seen in the more active ulcerative stages of the disease. These early lesions may be seen in any portion of the affected gut. By using the sigmoidoscope we have demonstrated them low down in the rectum within a couple of inches of the anus. They are most frequently encountered and are most numerous in the more acute cases, but may be seen also in quite chronic ones.

2. *Ulceration.*—A.—Type of Harris: These lesions, though rarer than the classic type, are nevertheless not uncommon. They are possibly the result of the process of erosion mentioned above and are primarily confined entirely to the mucous membrane. As Harris says, they "generally reach into the submucosa and rarely to the circular muscle, but never deeper." They probably commence as a very circumscribed erosion and spread laterally as rapidly as they do downward. Macroscopically, the edges are abrupt, sometimes giving the ulcer a "punched-out" appearance. They are round or oval in form and their edges are usually thickened and marked by intense congestion. Their bases are comparatively clean, grayish and edematous. They are often situated on the apices of intestinal folds and have a tendency to increase in the direction of the short axis of the bowel. This type of ulcer has a general distribution and may be encountered in any part of the bowel. It is less frequently seen in the more advanced and very chronic stages. The fact that it is most common in those bowels that show the preulceration lesion speaks for its being intermediate between the very early petechial lesions and the undermined ulcer. This is the type most common in the ileum.

B.—Classic or Undermined Ulcers: These are seen in an early stage as minute yellowish or grayish spots in the mucosa of the bowel, frequently at the centers of the petechiæ spoken of as the preulcerative stage of the disease, and are usually surrounded by a zone of congestion more or less well marked as the case may be. These spots represent the mouths, filled with necrotic material, of passages leading to larger or smaller cavities in the submucosa, which are also filled with the same material. As the process extends, the pocket in the submucosa is enlarged parallel with the surface in all directions, and, although the necrobiosis eventually involves all the coats of the bowel, the muscular layers and the mucous membranes suffer less rapidly, so that there results an ulcer with its base on the circular muscle and with overhanging edges of mucous membrane. Such ulcers may be of sizes varying from that of a pinhead up to that of the palm of the hand, and may occur in any part of the large intestine and even in the lower part of the ileum, though in the latter they are smaller.

During the process of ulceration, the submucosa becomes generally thickened and edematous, as may also the muscular layers and the peritoneal coats.

During extension, such ulcers may coalesce beneath or on the surface, and it is no rare thing to find even small submucous pouches communicating with each other by small tunnels, while the mucous membrane may show no more than a catarrhal condition.

In many of the larger lesions, the circular muscle fibers are exposed, forming the base of an ulcer, and shreds of this may be seen nearly separated from the rest, and these shreds may be removed by gentle scraping. In still more extensive cases the muscular layer may become necrosed or even perforated, and the ulcer may then be bounded externally by the peritoneum or omentum.

There are, perhaps, few diseases in which the omentum plays so important a protective part as in the one under discussion. Very early in the ulcerative stages this membrane may be found plastered on the peritoneal surface of the gut in preparation for the accidents that may follow.

Because of this function of the omentum, localized suppurations are common. Ulcers may also perforate into the subperitoneum at almost any point, and the abscess usually remains circumscribed or may furrow widely. In one case of this class, a furrowing abscess had perforated into the retroperitoneum in the cecal region and had extended upward and perforated into the right pleural cavity.

3. *Healing.*—As healing takes place, the mucous membrane gradually extends from the margins, so that in the early stages the ulcer seems to be lined with epithelium, except on its base. In the case of very small ulcers there may be complete repair, in other more advanced cases there is considerable formation of scar tissue which may lead to contractions. This we have not seen. The commonest outcome in cases of long duration, especially in those not treated systematically and continuously, is the establishment of a chronic catarrhal condition, with subsequent atrophy—a condition of chronic atrophic enteritis. This is recognized in various parts of the world as sprue or psilosis. It is not a result of amebiasis only, although it may be so in imperfectly treated cases. The gross features of the bowel in such a condition are thinness, absence of normal folds, atrophy of the mucous membrane and increased length. Combined with this atrophic condition may be one of localized hypertrophy, resulting in the formation of more or less well developed polypi.

### EPITOME OF THE GROSS APPEARANCES.

In a general way, the process studied is as follows: In the early stages of the disease there occurs a catarrhal condition of the mucous membrane, with hypertrophy and cystic and mucoid degeneration. At various points, from the lower part of the ileum to the lower part of the rectum, small raised hemorrhagic spots occur, which later lose their mucous coverings and resemble erosions, and later still ulcerate. If abscesses have formed in the submucosa, they rupture into the bowel and form the early stage of undermined ulcers. The ulcers resulting from simple erosions are not, as a rule at least, of the undermined type, but they may become so. Undermined ulcers are usually, while the cause persists, progressive.

When secondary infections occur, the processes of the disease may be modified by diffuse congestion, hemorrhage, diphtheritis or gangrene. Perforations may occur in the course of the ulcerative stages of the disease, with resulting localized or general peritonitis, retroperitoneal abscess, etc.

The healing of small lesions may occur with complete repair, or of large lesions with the formation of scar tissue and with subsequent contractions. Peritoni-

tis may result in the formation of adhesions. Complete cure may be the eventual outcome, or a condition of chronic atrophic enteritis or chronic catarrhal enteritis may result.

Generally, and probably always in active cases, the intestine is thickened. This increase may be due to edema of all the layers, but chiefly of the submucosa. It may also be due to the presence of the abscesses and sinuses which are so common in that layer. In very severe cases the subperitoneal coat may be very much thickened, mostly from edema. The mucous membrane between the ulcers in uncomplicated cases usually appears normal.

### DISTRIBUTION OF THE LESIONS.

There seems to be only a partial unanimity regarding the extent and localization of the lesions in the disease. To take recent remarks on the subject, Futcher[5] says that the rectum in a majority of cases is uninvolved or is so only to a slight extent. Harris[2] remarks that in fully half the cases the lesions do not extend above the beginning of the transverse colon, and Rogers[4] writes that almost invariably the lesions are more marked in the cecum and ascending colon and frequently are limited to these areas.

In considering the presence of lesions above the ileocecal valve, Futcher says that in two of 119 cases slight superficial ulceration was present in the last few centimeters of the small intestine. Rogers concludes that "the process never invades the ileum, which is contrary to frequent results in other forms of dysentery." Many writers speak of the more or less frequent involvement of the appendix. Such observations taken from literature might be multiplied many times, but these serve to show how different are the results of careful and accurate observations based on studies carried out in different countries and even in different parts of the same country.

### STATISTICS.

Our statistics are based on two series of cases, each of which comprises one hundred cases.

Series A is composed of cases in which the treatment was either unsystematic by enemas or none at all.

Series B is composed of cases treated by rectal injections.

SERIES A.

| | |
|---|---|
| Entire large bowel involved (except extreme lower part of rectum) | 87 |
| Lesions confined to cecum and ascending colon | 5 |
| Lesions confined to transverse colon | 1 |
| Lesions confined to descending colon, sigmoid and rectum | 0 |
| Not recorded | 7 |
| | 100 |
| Appendix ulcerated (with large intestine) | 6 |
| Ileum ulcerated (with large intestine) | 2 |

SERIES B.

| | |
|---|---|
| Entire large bowel involved | 72 |
| Cecum and ascending colon | 18 |
| Descending colon, sigmoid and rectum | 9 |
| Transverse colon | 1 |
| | 100 |
| Appendix involved (with large intestine) | 8 |
| Ileum involved (with large intestine) | 5 |

The variations shown in the two series, and those in literature as well perhaps, may be at least partly explained. The factors to be considered are the duration of the disease at the time of death, the kind of treatment, its duration and the stage of the disease in which the patient was when treatment was commenced.

If we take the Johns Hopkins Hospital series as an example, we may be reasonably sure that the majority, if not all, of these patients were treated by irrigations by rectum, as in our cases of Series B. A rational consequence of this might be that in many cases the lower lesions in the bowel had healed, and at autopsy only those that were inaccessible to treatment or which irrigations had not reached would be seen. This undoubtedly accounts, in part, for the variations manifested in our series, and this dissimilarity would undoubtedly be more prominent had a larger number been properly, consistently and persistently treated.

The duration of the disease at the time of death is unquestionably an exceedingly important factor in untreated cases and in those in which irrigation has been neglected. It may be said that without treatment the greater the duration of the disease the more extensive is the distribution of the lesions.

For the reasons indicated and for other obvious ones, it may be said that the findings at necropsy can not be taken as a guide to the distribution of the lesions at any period save that immediately preceding death.

We have selected from our series twenty-five cases in which death occurred from intercurrent disease early in the amebic process, and find that among these there is an increased proportion of cases showing ulceration confined to a portion of the intestine and a coincident decrease in the number showing ulceration throughout the large gut.

| | |
|---|---|
| Ulceration confined to the cecum and ascending colon | 11 |
| Ulceration confined to the descending colon, sigmoid and rectum | 8 |
| Ulceration throughout the bowel | 6 |
| | 25 |

Lesions of the small intestine, in our experience, have always been confined to the lower ileum and have been the apparent result of direct extension from the cecum, which is usually severely ulcerated in these cases. We have had one case in which ulceration extended 32 cm. above the ileocecal valve, but ordinarily the lesions consist of one or a few ulcers immediately above, or within 5 c.c. of, Bauhin's valve. When, however, there is a diphtheritis of the cecum, the membranous exudate more often extends above the valve for a longer or shorter distance, but without ulceration. In such cases amebas have not been demonstrated, and consequently the cases have not been included in our statistics.

As in the small intestine, so in the appendix, only cases with distinct ulcerative processes, in which amebas were demonstrated, have been included in our statistics. In many necropsies, this organ was found clinically diseased from causes other than amebiasis and occasionally showed an acute process which could not be proved to be due to amebas. All such cases have been excluded from the tables.

### HISTOLOGY.

In general it may be said that the mucous membrane between the ulcers is but little changed. In many places no changes from normal can be noted. In the immediate neighborhood of the lesions, however, there is a tendency to hypertrophy, with mucoid degeneration and even cyst formation. The latter is less common in the cases we have studied than in those reported by Councilman and Lafleur. The most common change in the mucosa is in the immediate vicinity of the lesions and is shown by a tendency to more diffuse staining than is seen in normal epithelial cells; and whenever this, perhaps a sign of incipient coagulative necrosis, is seen, there is usually some distortion of the glands beneath the surface. Such changes are most frequently seen in the very early stages. In many cases, the cells lining the glands are separated from the basement membrane and lie singly or in clumps in the lumen. Under such circumstances it is not uncommon to see amebas lying

5. THE JOURNAL A. M. A., Aug. 22, 1903, p. 480.

among the desquamated epithelial cells or forcing their way between such cells and the basement membrane.

The most marked feature of the early lesions is congestion, often combined with capillary hemorrhages which are most noticeable immediately beneath the mucosa. This congestion may extend even to the submucosa, in which layer there is also a certain degree of thickening due chiefly to edema. Together with congestion, there is an increase of cellular elements of the lymphoid type in the interglandular tissue. The muscularis mucosa at this stage of the disease may show no changes or only a slight edema.

The most interesting feature of this early process lies in the distribution of the amebas. Not only may they be seen in the glands as described above, but they may also be present, sometimes in large numbers, in the interglandular tissues and blood vessels, in the muscularis mucosa and in the dilated veins of the submucosa, and this with changes scarcely perceptible to the naked eye or if only the low powers of the microscope are used. *In such lesions, bacteria are very few in number and often can not be found even after prolonged search, and none can be demonstrated in the amebus.* These show even in the blood vessels the peculiar rod-shaped or crystalline bodies that stain intensely with magenta and hematoxylin, the radiate structure of the ecto-plasin and ingested cells.

In sections from lesions slightly more advanced and showing a more extensive, though still superficial, necrosis, the glands immediately surrounding the lesions are hypertrophied and the cells show mucoid degeneration. There is the same lymphoid infiltration, with, if anything, a greater congestion. In the congested area each gland mouth seems to be surrounded by a zone of hemorrhages. The cells of the necrotic mucous membrane are incorporated, with occasional leucocytes, granular detritus, amebas and bacteria, into a more or less well-formed membrane. There is a more extensive separation of the glandular cells, and in such glands amebas usually can be seen either in the lumina or between the cells and the basement membrane. Within the interglandular connective tissue amebas may also be seen in the blood vessels and lymph spaces. As the process progresses and as the lesions become more advanced, the effect on the submucosa is more marked. The congestion is augmented, the edema is increased and the number of amebas is greater. There is usually also an increase in the mucoid changes of the epithelium surrounding the lesion. On the contrary, in a few cases we have seen a very low, atrophic mucous membrane and a comparatively thin-walled gut, although there were extensive ulcerations. It is reasonable to suppose that we were dealing in such cases with an infection of a bowel previously the seat of a chronic enteritis. In all the cases that we have studied, regardless of the state of the mucous membrane or submucosa, we have seen an extensive lymphoid cell infiltration and at least a moderate hypertrophy of the lymphoid apparatus.

In all lesions, whether early or late, the character of the cellular infiltration is the same in uncomplicated cases. It seems, if amebas can be demonstrated in the tissues and if at the same time there is a polymorphonuclear infiltration, that bacteria are playing an active part in the process, especially if with the infiltration there is any degree of nuclear fragmentation. In certain cases, infiltration with polymorphous leucocytes may be seen about the margins of the ulcers, although at the base of the lesions and in the submucosa they were present in but inconsiderable numbers. In some cases, although there were some, or even many, bacteria present, there was no process that seemed to be directly attributable to these. It is possible that in such cases these were simply the non-pathogenic, harmless commensals of the amebas. In others, bacteria seemed to play at least as important a rôle as the amebas, noticeably in those cases in which there was diphtheritis and gangrene. It may be that the bacteria play an important part in determining whether or not hemorrhages shall occur, for it is certain that in uncomplicated cases thrombosis is a common and early occurrence. In many very early cases the interglandular vessels of the submucosa may be seen generally thrombosed. If an ulcer is filled with a diphtheritic slough which is carried away suddenly, the chances of the hemorrhages are much increased, as is the case in typhoid.

Usually the necrotic process extends for some distance beyond the ulceration and often beyond the amebas, but in many instances amebas seem to be present in healthy tissue, notably in the early lesions. It is a question whether this necrobiosis is the result of some secretion of amebas or whether it depends more on thrombosis. In some places one seems to be the predominating factor, in others the other, while in still others neither appears to be such. It is certain, however, that the thrombosis assists the amebas in extending their zone of action, as it may likewise assist the bacteria.

Necessarily the contents of the ulcers vary according to the degree of ulceration and to the character of the bacteria present. In uncomplicated cases, which microscopically show a rather clear, yellowish, gelatinous material in the opening, the ulcer contents are composed of a granular base of albuminous character, in which cells in various stages of degeneration are imbedded, together with amebas, bacteria and usually a few red blood corpuscles.

In all the lesions the amebas vary widely in size. Measured with a Zeiss-Scheiben micrometer, they range between 4 and 35 microns.

In the earlier stages of the amebic invasion, the edema affects the submucosa. In the later ones, the subperitoneal coat is also involved and adds considerably to the thickness of the gut. Eosinophiles are not uncommon in either the modified or unmodified amebic process. They occur, for the most part, in tissues at some distance from the lesions, usually in the neighborhood of blood vessels, and are not uncommonly encountered in the subperitoneal connective tissue when that layer has become edematous. These are, perhaps, more numerous in the secondary infections, as are also mast cells. Plasma cells are frequently seen in the submucosa. In the most extensive ulcerations the picture is modified only by the extent of the process. Whether the ulcers are undermined or not, there is always the same appearance of coagulative necrosis, with lymphoid infiltration, congestion and thrombosis, and comparatively little leucocytic invasion.

The two most evident features of the intestinal lesions, when viewed with a comparatively low power of the microscope, are the necrobiosis and the relative infrequence of leucocytes, features which suggest the important rôle of the amebas, for ordinarily in bacterial infection there is an associated local leucocytosis of varying intensity. A point of some importance is brought out by the fact that in the very early lesions—

the preulcerative stage—the amebas may be encountered not merely in the glands, but beneath the epithelium and within the lymph spaces and blood vessels of the interglandular tissue and the submucosa.

THE CHARACTER OF AMEBAS IN SECTIONS.

In toluidin blue and eosin the ectosarc stains fairly definitely and the vacuoles of the protoplasm show well. The bacteria also stain, as do the encysted bodies and fragments. The nucleus is very definitely stained and surrounded by a more or less distinct perinuclear space. The nuclear membrane is a clear deep blue. The nuclear protoplasm is pink and contains one or several deep blue-black bodies, or perhaps none. There may be several dark-stained thickenings in the nuclear membrane. As a rule, in well-stained sections the amebas, where they do not contain much extraneous material, such as bacteria and nuclear detritus, are less deeply stained than the cells of the intestinal mucous membrane. The protoplasm of those deep in the tissues is less intensely stained than that of those in the mucous membrane, and it may be that this phenomenon is due to the fact that in the more superficial layers the organisms have taken up more mucous material. That there is some reason for this supposition is shown by the fact that this stain is much less useful in studying the organisms in liver abscesses, where, of course, there is no mucus.

Perhaps the most brilliant stain for amebas in tissues is that of Borrel. This consists of:

1. Saturated aqueous solution of Magenta red.
2. Saturated aqueous solution of picric acid. Saturated aqueous solution of indigo carmin aa.

Stain with No. 1 for 20 minutes and wash.

Stain with No. 2 for 5 minutes, wash and differentiate with alcohol, xylol and balsam.

With this the amebas are not so readily distinguished by the low powers of the microscope as with the thionin or eosin toluidin-blue stain, but the finer organization is much more easily studied with high powers. Generally, with this stain the amebas are less deeply colored than the surrounding tissues, being a rather pale bluish or purple, or, in well decolorized specimens, of a greenish hue. The edge of the organisms shows as a fine blue line, which is more distinct about the body of the parasite and less distinct about the pseudopodia. The ectoplasm appears as a finely reticular or almost hyaline substance, the fibrillar or granular part of which is stained a very faint blue. The endosarc appears as a granular material more deeply stained than the ectosarc, and purplish, bluish or greenish, according to the degree of decolorization. Within this are spaces which remain uncolored, though in thick sections they have a bluish tint due to the underlying stained material. There may be bacteria also in the endosarc. There are also the rods of which Councilman and Lafleur speak, which are not seen in all cases, occurring in those in which there is more extensive sloughing or diphtheritis. It may be that these are crystalline, derived from the blood, or Charcot-Leyden crystals, which are occasionally found in leucocytes in certain conditions, and which Askanazy[6] says are oxyphilic.

The nucleus may be surrounded entirely or in part by a clear perinuclear space. The general color of the nucleus is violet or purplish. The outlines are sharp, and, if the section is not too decolorized, should be a clear crimson, which may be in the form of a complete ring or of an incomplete one, or may be nodulated on its inner surface, corresponding to thickenings in the chromatin. There are also occasionally crimson granules within the nucleus and occasionally one perfectly round mass corresponding to the nucleolus.

Ingested cells, such as red blood corpuscles, leucocytes, etc., may also be seen within the protoplasm in various stages of degeneration, the stain depending on the extent of the process.

In sections so decolorized that the magenta is all removed, the nucleus appears a blue color deeper than the tint of the rest of the cell and with the chromatin material still more deeply stained.

Heidenhain's iron hematoxylin is as excellent a stain for amebas as it is for other tissues, although not so brilliant as the magenta-picro-indigo carmin. In carefully manipulated sections the nucleus of the amebas is somewhat more deeply stained than the cystoplasm and ordinarily appears as a dense blue-black ring, in the center of which is the round black nucleolus. The nuclear plasma is usually just of a blue tint and is divided by a mesh of delicate dark reticulum. There may be other deeply stained chromatic elements or granules within this. The radial striæ of the cytoplasm is well shown and the crystalline bodies are, when present, an intense black. The spongioplasm appears as a network of dark lines and the cell boundary is sharply differentiated. Red cells, when present, stain according to the state of degeneration, those most recently ingested being black, those least recently yellowish. Bacteria, when present, stain sharply and distinctly, when not too far degenerated or digested.

Amebas grown in cultures from amebic ulcers, when stained by Borrel's method, show somewhat different staining reactions.

Cover-glass impressions may be made in the following way:

A cover-glass is placed on the growths on agar plates, removed quickly and instantly plunged into a very hot saturated solution of mercuric bichlorid. They are then washed in Gram's solution or a weak tincture of iodin, and rinsed in 80 per cent. alcohol, after which they are washed in water. The stain is then applied in the usual way. After this process the preparations are differentiated in alcohol, cleared in xylol and mounted in xylol-damar. The amebas are seen in various conditions, as they were in the culture, and of various shapes and sizes. In many the pseudopodia have not been withdrawn and can be well seen. Under these circumstances the ectosarc has a pale, diffuse, blue color, or is perhaps very finely granular and has a very sharply differentiated limiting line. Usually, however, this is not well seen and the whole organism has a sharply circumscribed, blue, granular appearance. The contractile vacuole shows clearly as an unstained, ovoid or oval space, usually near the surface of the organism, but occasionally near the nucleus.

The nucleus is composed of a round, central, deep purple body, surrounded by a narrow, pale bluish, homogeneous zone, and this, in turn, is surrounded by a denser, blue, granular zone. About this, in turn, is ordinarily a second more or less faintly stained zone. The whole nuclear body is round or slightly oval. The nucleolus is always round.

Comparing the amebas in such preparations with those in sections, we can readily see that the relative size of the nucleus is the same, as is also the relation between the protoplasm and nucleus; but in the tissues the contractile vacuole is usually not so distinct and the

6. Munch. med. Wochft., 1904, vol. II, 1945.

nucleus does not present the same appearance. This may be due to the fixation or it may be due to the different degree of decolorization. The dissimilar nutritive conditions may also affect the microchemical staining reactions.

The small amebas, those the size of an erythrocyte or smaller, should show the same relation in the size of nucleus and cell body.

The distinguishing feature of the amebas is their generally irregular or oval shape, though they are often round, their relatively small, round nucleus, and the larger amount of granular or vacuolated protoplasm, which often contains foreign bodies.

### RELATION OF THE AMEBAS TO THE TISSUES.

*The Mucous Membrane.*—It is not known whether the amebas are able to attack or to pass through an intact mucous membrane; in fact, it seems probable that in order for them to enter the deeper layers of the intestine there is some change from the normal (Schaudin). It is possible that catarrhal conditions, however slight, are accompanied by erosion, or necrosis of even a few, of the superficial cells, and would offer the necessary conditions for invasion. It is, at any rate, certain that the amebas have less influence on the epithelial cells than on the supporting tissue. That this is true may be demonstrated repeatedly. In many glands the amebas may be seen either in the lumen or between the lining cells and the basement membrane. As a rule in these cases the epithelium detached has lost no more of its normal character than might be expected, and if adherent it seems more healthy than would be imagined in the presence of an organism whose power of causing cellular destruction is as great as it is in the case of the ameba. Generally speaking, epithelium seems to have as great resistance to the ameba as has muscular tissue.

*Muscle.*—In all works on amebiasis attention has been called to the lack of resistance the connective tissue offers to the progress of the organisms. Attention has been repeatedly called to the fact that the extensive ulcerations are in form and situation dependent on this quality in the submucous layer of the intestinal wall. The preliminary feature of the changes in this position is edema, which, after invasion by the amebas, is followed by swelling of the fibers and cells, infiltration with round cells and lymphocytes, sometimes accompanied by fibrin formation. The nuclei of the swollen cells become paler, the appearance of fibrillation is lost and the tissue becomes hyaline or necrobiotic. A further feature of the process is that new tissue is found early and this has the appearance of granulation tissue. Suppuration, as previously indicated, probably does not occur in the uncomplicated disease.

*Blood Vessels.*—Just how the organisms enter the blood vessels can not be satisfactorily stated. In some sections they are seen in these vessels in large numbers, in the same or others they may be seen in the perivascular lymph spaces or they may appear immediately beside the endothelium of the capillaries. It is possible that they enter directly through the capillary walls by virtue of their inherent power of progression, in much the same way as the leucocytes wander in and out. There is the possibility that in the process of tissue destruction the vessel walls are so changed as to make this process more practicable, or that following capillary hemorrhages and before coagulation had occurred the organisms may enter the vessels and make their way along. Certain it is that they do not necessarily cause thrombosis by their presence, although this appearance is by no means uncommon in tissues, and especially in the vessels of the interglandular tissues. So far as the blood cells are concerned, the amebas are able to ingest and to destroy apparently healthy erythrocytes and leucocytes.

*Cells.*—It was shown by Councilman and Lafleur, and forcibly insisted on by Howard, that leucocytic infiltration is not a feature of amebiasis. On the contrary, it is stated that the process is more in the nature of a subacute or chronic inflammation, in that the cells predominating in the infiltration are formative ones and lymphocytes. In addition to these last mentioned cells there is often a considerable number of eosinophiles, though this is not the rule. If the condition is a chronic inflammatory one, however, then this is the type of infiltration we should expect, for lymphocytes and eosinophiles are the cells which, par excellence, occur in such pathologic states.[7]

In one series of sections we saw considerable numbers of mast cells, which occurred chiefly in the glandular layer of the bowel. On what conditions the presence of these depends we can not say, except to note that in the bowel from which the sections were made there was considerable diphtheritis.

Plasma cells are not uncommonly seen in the submucosa, as Councilman and Lafleur state. If these cells are of lymphoid origin, we should expect them to be frequently met in subacute or chronic inflammation in which there is a proliferation of, and invasion with, lymphoid cells.

### RELATION OF AMEBIAS TO BACTERIA.

From our experience it can not be said that the presence of bacteria limit the field of activity of the amebas. As a matter of fact the organisms seem to be about as numerous in cases complicated by bacterial superinfections as in uncomplicated ones, unless it be in those in which pyogenic cocci are present. In one case so complicated there were certainly fewer amebas in the lesions and there was very active leucocytic infiltration with marked coincident karyorhexis, a very uncommon picture for amebiasis.

When amebas are found in exudates rich in bacteria they show evidence within their bodies of a very active phagocytosis.

### CONCLUSIONS.

1. Intestinal amebiasis is a peculiar ulcerative condition of the intestine caused by Amœba coli (Lösch) usually confined to the large intestine, though occasionally (7 in 200 cases) the ileum is affected and more often (14 in 200 cases) the appendix is involved.

2. In the majority of cases the condition affects the entire bowel (159 in 200 cases), though it may be limited to one or more portions, most commonly the cecum and ascending colon (23 in 200 cases).

3. The ulcers show a tendency to be undermined, due to the lack of resistance on the part of the submucous layer of the bowel.

4. The organisms may enter the blood vessels very early in the disease and may be transported to the submucosa without lesions of the muscularis mucosa.

5. The disease is a subacute chronic inflammatory process, as shown by the character of the exudate and infiltration, by the early formation of granulation tissue and by the absence of leucocytic infiltration.

7. Mult. Brit. Med. Jour., 1904, II, 585.

6. Complete healing may be accomplished, or a condition of chronic atrophic enteritis or chronic catarrh may persist, which is known as sprue or psilosis.

The photographs and photomicrographs were made by the Government Photographer, Mr. Martin. The colored drawing (27) was done by Dr. W. B. Wherry. The other colored drawings were made by Mr. Espinosa, the artist of the Bureau of Government Laboratories. To these gentlemen we take occasion to express our thanks.

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## THE CORRODING PROCESS OF THE OVUM IN ITS IMPLANTATION IN THE FALLOPIAN TUBE, A SOURCE OF HEMORRHAGE IN TUBAL PREGNANCY.*

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The surgical history of ectopic pregnancy is dotted with puzzling cases in which undoubted symptoms of the condition were present, and in which on operation a greater or less quantity of blood was discovered in the pelvis, and yet careful microscopic examination of the tissues removed failed to show any trace of the products of conception. In many of these cases careful examination has failed to disclose the source of hemorrhage.

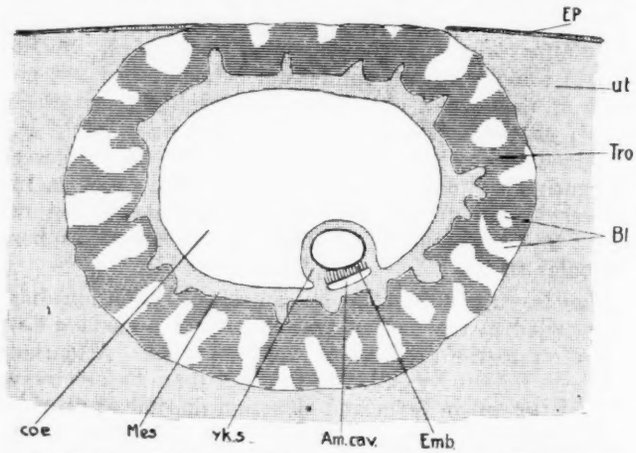
Some recent studies in biology bearing on the implantation of the ovum in the uterine mucosa have revealed a process which when transplanted, as in tubal pregnancy, sheds a flood of light on many of these obscure cases. The established teaching has been that the impregnated ovum when it reaches the uterine mucosa nestles among its follicles, which at once take on a hypertrophic development, reach out on all sides and envelop it in their arms. Later developments bring into existence the chorionic villi, the intervillous spaces and the entire mechanism of nutrition. The process of attachment of the ovum to the uterus is known now to be the work of the ovum itself. The ovum is the active agent, and embryologists designate this early attachment by the term implantation.

It may be of interest and perhaps instruction at this point to go quite fully into the details of this process. What I shall say has been gathered almost entirely from an address on the subject by Professor Minot[1] of Harvard Medical School, at the meeting last year of the American Gynecological Society. It has been discovered that certain tissues possess the property of attacking and destroying other tissues. This faculty consists in a process of digestion and is supposed to be chemical in character, from which the tissue itself does not suffer, but which will destroy other tissues with which it comes in contact. The destructive process of the phagocytes is doubtless analogous. It is known that certain young tissues of the embryo are endowed with this capacity, and, while it has not been absolutely demonstrated that the human embryo possesses it, the observations on the embryos of lower animals confirmed by less complete studies of the embryo of man lead to the belief that such a phenomenon attends the implantation of the human ovum.

The process of implantation as observed by Minot and others in various animals is as follows: The ectoderm of the chorion undergoes a peculiar proliferation by which its cells become very much more numerous. Some of the cells rapidly assume a distinctive character and are easily recognized by their large size. This layer of ectodermic cells is called by Minot the trophoderm. Wherever these modified ectodermic cells come in contact with the walls of the uterus, destructive changes go on in the uterine tissue, producing a cavity in which the ovum lodges itself. The trophoderm then undergoes a hypertrophic degeneration, producing a series of irregular spaces which persist and become the intervillous spaces of the placenta. Papillary outgrowths of the chorionic mesoderm meanwhile penetrate the trophoderm, initiating the formation of the chorionic villi.[2]

The earliest stage of the human ovum yet secured for observation and described is presented in the work of Peters, and is known as Peters' ovum. The accompanying diagram is based on its description.

The effect of this corrosive action is readily conceived in cases in which the implantation of the ovum is transferred from the uterus to the thin-walled Fallopian tube. While in most instances the implantation is successfully accomplished, there must be frequent instances in which the corroding process extends completely through the wall of the tube or may bring the intervillous spaces so near to the surface that the blood




Explanation of diagram: Ep. uterine epithelium; Ut, mucous membrane (decidua) of the uterus; Tro, trophoderm; Bl, spaces formed by the degeneration of the trophoderm; maternal blood enters these spaces from the decidual blood vessels; Emb., embryonic shield; Am. Cav., amniotic cavity; Yk's, yolks sac, the entodermal lining of which is indicated by a heavy black line; Mes., chorionic mesoderm; Coe, extra-embryonic celom.

pressure bursts through the peritoneum and occasions serious hemorrhage.

Such a condition first came under my observation as recorded in the following case. The history is given quite fully to illustrate the fact that this apparently simple lesion may be attended with serious or even fatal hemorrhage:

*Patient.*—Mrs. R., aged 33, a former patient of mine, called at my office Sept. 20, 1903, and gave the following history:

*History.*—She had been married 4 years and had two children, the youngest 10 months old. She is a strong, healthy woman, and had nursed both children. While nursing the first child, monthly flow came regularly every 28 days, beginning one month after parturition. With the second child an apparently regular menstruation appeared one month after parturition. It disappeared then and did not return

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-sixth Annual Session, July, 1905.

1. Trans. Amer. Gyn. Soc., 1904.

2. The Harvard Medical School is forming a collection of serial sections of human embryos which is intended always to be open to competent investigators and students. Specimens are solicited, those of first and second month being especially desired. They are best preserved by prompt insertion in a mixture of formalin, one part, to nine of water.

till two months ago, July 15, when it was normal in character. In August there was no sign of menstruation, but on September 4 (16 days previous to interview) a painless natural flow began and continued for 8 or 9 days. Following this, there was indulgence in sexual intercourse on two successive nights and an unusual exaltation of sexual desire for a week or ten days. In this connection the patient said that, while ordinarily a sufficiently passionate woman, she had experienced while carrying both her children an unusual intensity of sexual desire during the first two months of pregnancy. The recurrence of this made her suspicious, although she was still nursing her child, and she called for an opinion regarding the possibility of pregnancy. A most thorough examination failed to reveal any physical signs or suggestion of pregnancy, either normal or otherwise, although I examined for both conditions. I advised a cessation of social duties, daily hours of rest in bed and prompt notification of any unusual occurrences. Occasional stains, spotting, appeared, and six days later sharp pains in the abdomen gave the impression that the regular menstruation was about to recur. Five days later, October 1, she entertained company at dinner. At the close of the function she had a sickening pain, grew pale and nearly fainted; she went to bed. October 9, she dined with her husband down town; on going home she had a bearing down pain and found that she was flowing rather freely. She remained in bed the next day, but the following day, Sunday, she got up to dinner at 1:30 and ate a hearty meal, although she had felt weak and miserable during the morning and suffered from pain in right abdomen shooting up to the shoulder. I saw her at 3 p.m.; she was in bed and was pale and pulse was weak; she had been flowing steadily since Friday.

*Examination.*—These symptoms and history pointing so positively toward ectopic pregnancy led to a careful examination. I could discover no enlargement of the uterus, comparing it with my recollection of its former size, but I did discover a perceptible enlargement of the right tube, although not very marked. I diagnosed unruptured tubal pregnancy, or tubal abortion of the right side.

*Operation.*—Directly after examination the patient suffered a sharp attack of pain and went into collapse. As soon as she had sufficiently revived she was placed in a carriage and taken to the sanitarium. Stimulants were cautiously used and she passed a comfortable night. Operation was performed at 1:30 p. m. the following day by vaginal section. After dilatation and curettage of the uterus a laceration of the cervix was closed with three chromic sutures. The usual T incision was then made in the anterior vaginal wall; the bladder stripped off and the peritoneal cavity opened. It was noticed that both the anterior and posterior vaginal fornices bulged quite markedly, and on opening into the peritoneal cavity there came a gush of liquid blood and clots. Some of the latter were dark and firm and some soft and bright, showing old and recent hemorrhage. The uterus was promptly delivered into the vagina and the right appendages brought down. The tube seemed to be intact and the fimbriated end normal in every way. The tube was enlarged and its walls thickened; there were also marked signs of congestion. On turning the tube to get a view of its posterior aspect, a small pinhole opening, through which a minute clot protruded, came into view at its middle third. The tube was rapidly quilted off and cut away—the ovary not being interfered with. After examining the appendages of the opposite side and finding them normal, the fundus uteri was restored to the pelvis and the vaginal incision closed. An opening was then made into Douglass' pouch for drainage, through which blood and clots were removed and a light gauze drain applied. Some difficulty was experienced in getting the bowels moved on the third day, but after that convalescence was normal.

*Examination of Removed Tissue.*—The interior of the tube gave no indication of the development of a placenta nor chorionic villi. The ovum at a very early stage must have eroded its way quite through the tube, and hemorrhages must have been quite frequent, if not almost continuous.

I cite this case as being a most interesting example of one phase of tubal pregnancy.

Paul Zweifel[3] cites a case in which hemorrhage occurred eight days after the first omission of the menses. The ovum at that stage could not rupture the tube and examination disclosed that the ovum had eroded clear through the tube and serosa into the peritoneal cavity. Whether the hemorrhage is moderate or sufficiently extensive to endanger life is a mere chance. These slight openings may or may not be attended with temperature, depending on the promptness with which aid is sought and obtained.

It would seem to be a fair inference that when a woman has skipped one menstrual period and is attacked with sharp pain in the hypogastrium, collapse, and vomiting with markedly feeble pulse, if there be no rise of temperature, an erosion through the walls of a gravid tube should be suspected at once and the necessity of prompt operation seriously contemplated.

A secondary feature of interest in my case is the fact that in less than a year after the operation in which the right tube was removed, the patient became pregnant normally and has been successfully delivered of a fine boy.

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## EXTRAUTERINE PREGNANCY: CASES OF UNUSUAL TYPE.*

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Many years ago physicians recognized extrauterine pregnancy and some patients actually recovered after ordinary treatment. Sometimes even then the diagnosis was made before rupture, and physicians treated these patients by killing the fetus with electricity, or morphin was injected into the sac and thus the life of the embryo was destroyed. Physicians then found patients with vague histories in whom inflammation would take place, and in the course of time an abscess would break into the rectum, bladder, or vagina, and fetal bones would pass. The physician then knew that he had a case of extrauterine pregnancy that had become infected and produced the symptoms that he was called on to treat.

With the advancement of abdominal surgery cases of extrauterine pregnancy were found during abdominal section. With the gradual development of pelvic surgery physicians were able to diagnosticate ruptured extrauterine pregnancy and by prompt operation could save a life. In fact, the general symptoms of ruptured extrauterine pregnancy are now so well known that almost every general practitioner recognizes the trouble and sends for a surgeon. There are exceptional cases, however, in which the classic symptoms of the course of the condition are absent or different and mistakes are made by very well posted diagnosticians. Having had two cases within a few days of each other of this kind, I thought a short report of these might be interesting.

CASE 1.—Mrs. O. B. R., aged 30, mother of three children, youngest 3 years of age, had menstruated regularly until Nov. 20, 1904.

*History.*—During Christmas week, as she explained it, she had some pain and only slight menstruation. In January, 1905, another and slight show with considerable pain kept her in bed for several days. February 14 she was taken with severe pain and inflammation. Her family physician

3. Brit. Gynec. Jour., Nov., 1903.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

recognized a swelling on the left side and treated it on general principles. The inflammation gradually subsided, and she was able to sit up and move around a little and then it started again. This continued for nearly ten weeks. She became very much emaciated and anemic, having temperature running up to 100 or 104.5. She was finally put on a stretcher and sent to me, a distance of 150 miles. She arrived at Harper Hospital April 26, 1905, in fairly good condition, but a typical case of long-standing sepsis. Carefully going over the history, I told my assistant it looked to me like a case of extrauterine pregnancy which had ruptured in the broad ligaments and had become septic.

*Operation.*—She was prepared for operation and was operated on April 27, 1905. I found a sac extensively adherent, containing a four months' fetus, with decomposed placenta and situated in the left broad ligament. The placenta could be easily removed, the sac was stitched to the lower angle of the abdominal wound and a rubber drainage tube inserted. The abdominal wound was closed with silkgut sutures.

*Result.*—She made a splendid uninterrupted recovery and returned home the twenty-fifth day. The power of resistance of some individuals is beyond comprehension.

CASE 2.—Mrs. C. R., aged 24, mother of two children, youngest two years, was brought to Harper Hospital April, 1905, with a temperature of 104.5, and with the statement that she had had a miscarriage and that there probably was retained membrane. I examined and found a large swelling on the left side, which I diagnosticated as an abscess in the left broad ligament, and the only thing to do was to operate and to clean it out as soon as possible. The pulse being 140 and 160, no time was to be lost and no extensive operation could be done. She was given an enema.

*Operation.*—With a few whiffs of chloroform, an opening was quickly made with scissors into the abscess cavity, which was then increased by tearing with the fingers. Nearly a quart of pus flowed out, and decomposed tissue, which was recognized as placenta, was removed. The cavity was cleaned with sponges, not irrigated, and a rubber drainage tube inserted. She made a quick recovery, and in two weeks returned home. After she was able to talk I got the following history:

*History.*—She had menstruated regularly since her last child's birth until Feb. 5, 1905. She did not flow again until March 21, when she had severe pain with the menstruation. She considered herself pregnant and thought she was having a miscarriage. The pain, however, eased up somewhat. April 1 she was taken with severe pain, and continued to feel quite poorly and passed membrane from the uterus, which was supposed to be the placenta. She did not improve, however, but daily continued to get worse, fever and chills developed, physicians were changed, but her condition became steadily worse until she was brought to the hospital as above stated.

These cases could be amplified by similar ones, but they are sufficient to teach some lessons. One of these is that extrauterine pregnancy is more often met with than ordinarily expected. Another lesson is that a careful history of the onset of the disease will throw light on the subject. The patient often unintentionally throws the physician off his guard and only by persistent questioning will he get at the real facts. I would conclude, therefore:

First, that extrauterine pregnancy must always be in the physician's mind in cases of sudden onset of pelvic trouble.

Second, that the least irregularity of menstruation is suspicious of extrauterine gestation.

Third, that inflammation and sepsis following a supposed miscarriage often are due to ruptured ectopic pregnancy.

Fourth, that prompt operation is always indicated; the choice of the vaginal or abdominal route depending on circumstances.

## DISCUSSION.

### ON PAPERS OF DRS. GOFFE AND CARSTENS.

DR. R. T. GILLMORE, Chicago suggested that if, after curetting the uterus, the scrapings are examined microscopically for decidual cells, an early diagnosis may be made and the case need not be allowed to become septic. Of course, decidual cells may be found in other conditions than tubal pregnancy in which the endometrium is inflamed, so that the finding of the decidual cells is merely suggestive. A careful microscopic examination of the tube should be made after the operation for chorionic villi. A blood count is of value in showing whether or not hemorrhage is due to shock or anemia, in ruptured tubal pregnancy.

DR. L. H. DUNNING, Indianapolis, declared that cases of extrauterine pregnancy at full term are very rare. Some years ago he thought he had such a case, but on careful examination he found that he was mistaken, and the final conclusions were verified afterward by microscopic examination. A full term ectopic pregnancy in a tube which has not ruptured would show no covering of peritoneum continuous above. In other words, it should be free in the abdominal cavity like an ovarian or fibroid tumor. If the sac is covered posteriorly with peritoneum, then it is not an ectopic pregnancy at full term in an unruptured tube.

DR. C. O. THIENHAUS, Milwaukee, said that the fact pointed out by Dr. Goffe of the Langerhans cells eating up and gradually destroying the walls of the tube shows that extrauterine pregnancy should be classified as a true neoplasm which demands immediate operation in every case in which the diagnosis is made, no matter whether rupture has occurred or not. The only exception would be in extrauterine pregnancy of seven or eight months. In these cases it is of great scientific importance to know whether or not the fetal sac is without or within the tube. In ruptured extrauterine pregnancy it is necessary to differentiate between cases in which Nature has formed adhesions and has encapsulated the blood and the tube; in other words, those in which a hematocele is present, and cases of free abdominal hemorrhage. In this latter class are usually cases in which the rupture of the tube takes place in the neighborhood of the uterus. These cases, though rare, are the most dangerous ones, because the hemorrhage is so profuse that Nature has no time to form adhesions; and if immediate operation be not performed the patient invariably bleeds to death. In such cases it is inadvisable to transport the patients to a hospital. They should be operated on at once wherever they happen to be at that time. The operation should be done as rapidly as possible, not in deep narcosis, but during the stage of excitement of ether anesthesia. About three years ago Dr. Thienhaus saw such a case, and had the good fortune, by prompt and quick operation, performed in a farmhouse, to save the life of the patient. Dr. Thienhaus was surprised to hear in the surgical section that so much chloroform is still used, as it is a well-established fact that ether is much less dangerous than chloroform. He has discarded chloroform entirely for the past four years and has used ether in all cases. When a tumor is found lying in the neighborhood of the uterus and it is uncertain whether it is a cyst, pus sac or a hematocele, an exploratory puncture or colectomy will often aid in diagnosis, and when blood is found one can say in 95 per cent. of the cases that it is ectopic pregnancy. In cases of infected hematocele, cleaning out and draining by the vaginal route is safer than the abdominal operation.

DR. I. B. PERKINS, Denver, said that he has noticed that several of these patients appeared to have healthy tubes, and in these instances the woman had imagined herself pregnant and took medicines intended to contract the uterus and to expel its contents. Ten days or two weeks later she would suffer from a ruptured tube. It occurred to Dr. Perkins that in all probability the pregnancy had taken place in the tube, and while the ovule was making its descent toward the uterus it was arrested at the cornu, where the tube was closed temporarily by the contractions of the uterus produced by the drugs taken, and that before relaxation occurred sufficiently to allow the impregnated ovule to pass into the uterus it had developed sufficiently and had become sufficiently adherent to the tube that it could not pass. He thinks it probable that tubal pregnancy frequently occurs in this way in a normal tube, and when the rupture occurs in these cases it is usually near the cornu, and the hemorrhage and shock are great.

Dr. D. C. Brockman, Ottumwa, Iowa, reported a case of synchronous extrauterine intrauterine pregnancy. A multiparous woman consulted him with a history of persistent vomiting and temperature. She was greatly emaciated, and on examination he detected a tumor in the central part of the abdomen. Blood count was negative. The woman knew herself to be pregnant, and the central tumor was taken to be a pregnant uterus at four and a half months. On the left side was a cystic tumor, in which he could get ballottement, but no evidence of abscess showing a pregnancy in the abdomen to the left of the uterus. Hoping that he could tie off the ovarian arteries and do a panhysterectomy without fatal hemorrhage, he opened the abdomen, but found the intestines so adherent to the sac that it was impossible to reach the ovarian arteries or to do anything with the sac without causing a fatal hemorrhage. He closed the abdomen and waited a few days before he delivered the fetus through the vagina. He did not attempt to remove the placenta, which was adherent to the right side of the sac, but packed the sac full of gauze and waited for the vessels to close. On the fourth day premature labor set in, and he removed the packing, hoping to stop the labor. Anodynes failed, hemorrhage occurred, with death six days after the operation from exhaustion due to hemorrhage. Dr. Brockman finds that there are about 133 cases of this kind on record in the majority of the patients. If another case like this one came to him, he thinks he would destroy the extrauterine fetus by electricity or morphin and allow it to remain, hoping the intrauterine pregnancy would continue to term.

Dr. William E. Ground, Superior, Wis., said that ectopic pregnancy is undoubtedly a condition that exists oftener than is usually suspected. The determination of the location of the fecundated ovum is a matter of mere incident. If the ovum is arrested in the Fallopian tube, tubal pregnancy will follow; if it locates in the body or fundus of the uterus, normal pregnancy will result, and if it forms an implantation in the lower uterine zone at or near the internal os, placenta prævia will be the consequence. Rupture in cases in which the implantation is near the uterus, always occurs early. Dr. Ground had a case in which the rupture occurred at the patient's next regular menstrual period; she had never missed a period. The symptoms of internal hemorrhage were extreme. The patient was sent to the hospital and the abdomen was opened. The tube was found torn clear across near the uterine cornua and the abdominal cavity was filled with liquid and clotted blood. As Dr. Ground understands it, the decidua is a hypertrophied endometrium, and the chorionic villi is the outer fetal membrane and purely a fetal structure; therefore, in cases of extrauterine pregnancy and in the absence of intrauterine pregnancy, one would not expect to find chorionic villi in the uterine scrapings.

Dr. W. O. Henry, Omaha, said that Dr. Goffe's case reminded him of one he had, and he thinks Dr. Goffe's explanation of the cause of the hemorrhage correct. The pregnancy occurred near the fimbriated extremity of the tube, and when the abortion occurred it was not a rupture, but simply an expulsion of the contents of the tube. When the fetus is located nearer to the uterus and rupture occurs, the fetus may be extruded entirely, but the placenta remain; when it is in the outer end of the tube, however, the entire ovum with its coverings is extruded. In other cases one will find the rupture near the cornu of the uterus, and hemorrhage ensues, the fetus being retained. If there is violent hemorrhage, it is not safe to move the patient any great distance, but ordinarily it is better to operate in a hospital. Dr. Henry considers that the point made by Dr. Gillmore with reference to making a diagnosis by examining the uterine scrapings is not correct, because in extrauterine pregnancy chorionic villi are not found in the uterus; they are only found in the tube.

Dr. C. L. Bonifield, Cincinnati, briefly reported a case which seemed to be one of unruptured tubal pregnancy. After the ovarian arteries were ligated, the whole mass was lifted up from behind the uterus, to which it was adherent. On most careful examination it appeared to be an unruptured tubal pregnancy, but he is convinced that rupture occurred, that a blood clot filled in the opening, and that after regeneration of the tissues the tube took on a normal appearance. He has seen two or three cases in consultation, in which most severe hemorrhage had occurred and the patient was practically pulseless, and had been so for eight or ten hours, but subsequently improved a little. In such cases he advises leaving the patient alone for eight or ten days until the blood clot has been absorbed and the woman is in condition to stand an operation.

Dr. J. H. Carstens said that microscopic examination, once in a while, may throw some light on the subject. He agreed with Dr. Henry about taking patients to the hospital. It is a question of the individual case. If he is 100 miles from home he will not take a patient to the hospital, but will do the best he can, and he thinks that some patients recover under the most adverse circumstances. Dr. Carstens does not think that one can tell where the rupture is located. The blood does not always come down into the cul-de-sac. Sometimes there are adhesions and the blood is up in the abdomen. One can not always feel the hematocele. If the hemorrhage continues with increase in pulse rate operation would better be done quickly. If there has been a hemorrhage, followed by shock, and the pulse remains about 120, then one can wait for an opportunity to operate; but so long as the pulse continues to increase in frequency, one must operate quickly, in two minutes, if necessary. He advises cutting and putting on forceps, allowing them to remain for hours if necessary; it will not hurt the patient. When the woman has had time to recover from the shock, a thorough operation may be done. Dr. Carstens operated through the abdomen in one case because the tumor did not extend down into the vagina. It bulged out in the side and looked like a big ovarian tumor, and that was the nearest point to get at it. When pelvic inflammation comes on suddenly without any apparent cause, and after investigating the case carefully one finds that there was some irregularity in menstruation and some pain, trouble is to be looked for.

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## RECENT ADVANCES IN THE PHYSIOLOGY OF HUMAN NUTRITION.*

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The question of the physiology of nutrition is a most important one. It is especially important to the physician, for without a clear idea of the subject he can not prescribe a proper dietary for the well or sick nor can he clearly understand the pathologic conditions which occur as a result of an improper amount or kind of food or the morbid conditions which result from malnutrition.

It is the belief of the layman and of many physicians, too, that the chief nutrition of food consists of the proteids, and meat is especially looked on as the food which affords strength and sustained effort. Among Europeans and Americans especially meat eating is very prevalent, chiefly for the reasons given above. Besides this, the palate is pleasantly excited by rich animal foods, and in consequence a larger amount is taken. It is too common a belief that the well-nourished body is the most healthy and best able to resist disease and that a large fat deposit in the tissue is an evidence of good general nutrition.

Our food is made up of proteids, fats and carbohydrates. The proteid or albumin, both animal and vegetable, is the tissue builder. Relatively, a larger amount of proteid is required for the growing individual, pound for pound, than for the adult. The fats and carbohydrates (sugars and starches) comprise the fuel of the body and supply the necessary heat and keep the machinery going.

### STANDARDS OF DIET.

As a result of the years of experiment by physiologists and of observation by many workers, certain general

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conclusions have been arrived at in reference to the requisite amount of food which is necessary to maintain health and strength and at the same time afford the best degree of efficiency with the least expenditure of energy on the part of the body to utilize the food. The standards of diet which have been brought forward by different workers do not differ very materially in the amount of the different elements advised for a twenty-four-hour dietary. The standard of Carl Voit of Munich is the one best known and has been recognized chiefly because of Voit's reputation as a successful student of nutrition.

Voit considers that a normal man of an average body weight of 70 to 75 kilos (150 to 165 pounds), doing a moderate amount of work, requires daily 118 gm. of proteid, 55 gm. of fat and 500 gm. of carbohydrate. This gives a total food value of about 3,000 calories and will maintain the body in a good physical condition. The standard introduced by Atwater gives 152 gm. proteid, 125 gm. fats and 400 gm. carbohydrates, affording a fuel value of 3,315 calories.

These standards are based on the idea that from 100 to 118 gm. of proteid or albuminous food is necessary to maintain the body in nitrogenous equilibrium; that is, that the amount of nitrogen excreted through the urine and feces should equal that taken into the body and at the same time the body be maintained in a state of equilibrium as to health, strength and practically also of weight.

Right here it is best to relate the fate of the elements taken into the body. Fats and carbohydrates when oxidized in the body are ultimately burned to simple gaseous products, that is, carbonic acid and water. Consequently the waste from these food products is quickly thrown out of the body without resulting harm to any of the tissues.

If such products are taken in excess, the harm which results will be chiefly in the deposits of fats in an undesirable amount, which would render the body gross and unwieldy. A too large amount taken is very apt to clog the alimentary canal, overfatigue the digestive organs and may undergo abnormal fermentation.

The waste products of proteid foods, when assimilated, consist of crystalline nitrogenous products which ultimately pass out of the body, chiefly through the kidneys. Before their elimination from the body these crystalline elements, which are in some instances toxins, float about through the body and may exercise a deleterious influence on the organism either general or local. The literature is full of theories on the diseases due to many of these crystalline products, chiefly uric acid, urea, the purin bodies, etc. All who are acquainted with these facts have recognized the importance of restricting the formation of the deleterious crystalline waste products by limiting as far as possible the amount of proteids taken into the body.

Until recently it has been the belief that the nitrogenous equilibrium of the body could not be maintained on a less amount of proteids than that given in the standard diet of Voit and others.

Recently some far-reaching experiments have been made on the physiology of nutrition and of metabolism of the body which practically revolutionize the ideas held by most physiologists, and it is the chief purpose of this paper to call attention to these new facts.

They are chiefly contained in an experimental study by Russel H. Chittenden, director of the Sheffield Scientific School of Yale University and professor of physiologic chemistry, on the "Physiologic Economy in Nutrition, with Especial Reference to the Minimum Proteid Requirement of a Healthy Man," and two articles by Otto Folin on studies made in the chemical laboratories of the McLean Hospital for the Insane, Waverly, Mass., on "Laws Governing the Chemical Composition of the Urine" and "A Theory of Protein Metabolism."[1] Bearing on the same subject to a lesser degree is the classical work of Prof. J. P. Pawlow of St. Petersburg, on "The Work of the Digestive Glands."

In the foregoing and in what follows I have made free use of the data found in the above-named books and periodicals and without further acknowledgement of my indebtedness to these eminent writers, I desire above everything else to recommend these books for a careful study by all who are interested in this subject. If this article accomplishes nothing more than to induce this audience to study the works named, I feel that it shall have accomplished a great deal.

With the object of throwing light on the subject of the physiologic economy in nutrition, Professor Chittenden made experiments on three groups of men.

The first comprised a group of five men, of varying ages, connected with the faculty of Yale University, whose work was distinctly mental rather than physical.

Second, a detail of 13 men volunteers from the Hospital Corps of the United States Army, as representatives of the moderate worker. These men were of different nationalities, ages and temperaments.

Third, a group of 8 young men, students in Yale University, all of them trained athletes, as combining the mental worker with a pronounced amount of physical work.

The individuals of these groups were experimented on by permitting them to have first the usual standard dietary, during which urinary examinations were made showing the nitrogen output together with the weight, strength, and physical and mental efficiency of the individual. Then for a long period of months each individual of each group was placed on a dietary which diminished his proteid food to one-half or less even of the Voit standard but permitting the individual freedom in his choice of fats and carbohydrates to the full satisfaction of his appetite. On this dietary the body weight diminished to a very moderate degree in some of the individuals, but soon became constant and the health, strength and efficiency, both mental and physical, was maintained at a higher level than on an ordinary standard diet. On the Voit diet or its equivalent the daily excretion of nitrogen through the urine amounted to at least 16 gm. On the diet with a much lessened amount of proteids the daily output of nitrogen amounted to about 6 to 9 gm. The nitrogenous balance was maintained on this diet, as shown by a practically constant body weight in each individual, especially after the individual had been on the diet for a few days, and by an estimation of the nitrogen output in the urine and feces. The diminution in the nitrogenous waste materials was chiefly in the urea nitrogen. The total output of uric acid in the urine was also diminished. Professor Chittenden did not take an account of the excretion of the kreatinin or of the sulphur compounds, but Folin made such observations, which will be quoted later. Chittenden showed undeniably that the men experimented on, who represented all classes of individuals in reference to mental and physical work, could meet all ordinary requirements of mental and physical labor with a high efficiency on an intake of proteid food far below that of the standard diets. It was found, too, that in the reduction of the proteid it was not necessary for these individuals to increase very

1. Amer. Jour. of Physiology, vol. xiii, Nos. 1 and 2.

much, if at all, the amount of fats and carbohydrates to maintain themselves in good condition.

Professor Chittenden comments favorably on the practice of a more thorough mastication, as brought out by Mr. Horace Fletcher "In the A B Z of Our Nutrition" and of the existence of a reflex of deglutition evoked by thorough chewing, which, if properly carried out, produced a very striking effect on the appetite, which was made more discriminating and led to a choice of a very simple dietary and in part reduced the craving for flesh food.

Those who have found it necessary to lavage the stomach of patients have noticed the very common want of a thorough division of the food by mastication, as shown in the large particles of food of all kinds which are found in the stomach of the average individual. This entails an enormously increased work on the digestive organs and one of the salutary lessons of the stomach tube to the patient is to show him the evils of insufficient mastication. That mastication should be carried out to the degree and for the purpose advised by Mr. Fletcher and Dr. van Someren is a question which time must solve. We are too apt to be faddists in many ways, but if the gentlemen named shall influence the observance of the physiologic law of thorough mastication of the food they will have accomplished much good.

Otto Folin, in the analysis of the urine from many individuals on a standard diet, found that the total nitrogen excreted in twenty-four hours averaged, in round numbers, about 14½ to 18 gm. This amount of nitrogen was represented by urea in from 86 to 90 per cent.; ammonia in from 3.3 to 4.5 per cent.; kreatinin in from 3.2 to 4.5 per cent.; uric acid in from 0.6 to 1 per cent. and undetermined nitrogen in from 2.5 to 5 per cent. On a dietary with a minimum amount of proteid, far below that of the standard diets, but still sufficient to maintain nitrogenous equilibrium and practically a constant body weight, the average nitrogen output in the urine diminished to 4 to 8 gm. in twenty-four hours. The percentage of urea nitrogen was now diminished to about 60 per cent.; the ammonia nitrogen was totally diminished, but the percentage was relatively slightly increased. Kreatinin remained the same in absolute quantity excreted. Uric acid was diminished in total amount, but not nearly in proportion to the diminution of the total nitrogen, and the per cent. of uric acid was therefore relatively increased.

In normal individuals, on a standard diet, the total sulphur output was 3 to 3.75 gm. in twenty-four hours. This was made up of inorganic $SO_3$—ethereal $SO_3$ and neutral $SO_3$. Of these, the inorganic $SO_3$ made up an average of 87 to 89 per cent., the ethereal 5.5 to 8 per cent., and the neutral 4 to 6 per cent. On a low protein diet the total sulphur excreted ranged from 0.77 to 1.50 gm. in twenty-four hours. This was represented by inorganic $SO_3$, reduced to about 60 per cent. The ethereal increased to about 14 per cent., representing a form of sulphur metabolism more prominent with than without the protein. The neutral sulphur was relatively increased, but the total excretion was the same—that is, unaltered in amount by the reduction in the proteids.

That the above statements may be made more graphic, I copy from Folin's article[2] the following, showing the analysis of the urine from the same individual, taking a standard diet in the first, and when taking the diet, with a much reduced protein in the second column.

| | I. | II. |
|---|---|---|
| Volume of urine .... | 1170 c.c. | 385 c.c. |
| Total nitrogen ..... | 16.8 gm. | 3.60 gm. |
| Urea nitrogen ..... | 14.70 gm. = 87.5 p. c. | 2.20 gm. = 61.7 p. c. |
| Ammonia nitrogen .. | 0.49 gm. = 39 p. c. | .42 gm. = 11.3 p. c. |
| Uric acid nitrogen... | 0.18 gm. = 1.1 p. c. | 0.09 gm. = 2.5 p. c. |
| Kreatinin nitrogen .. | 0.58 gm. = 3.6 p. c. | 0.60 gm. = 17.2 p. c. |
| Undetermined nitrogen. | 0.85 gm. = 4.9 p. c. | 0.27 gm. = 7.3 p. c. |
| Total $SO_3$ ..... | 3.54 gm. | 0.76 gm. |
| Inorganic $SO_3$ ..... | 3.27 gm. = 90.0 p. c. | 0.46 gm. = 60.5 p. c. |
| Ethereal $SO_3$..... | 0.19 gm. = 5.2 p. c. | 0.10 gm. = 13.2 p. c. |
| Neutral $SO_3$ ..... | 0.18 gm. = 4.8 p. c. | 0.20 gm. = 26.3 p. c. |

A glance at the table shows clearly the relation of the different forms of N and $SO_3$ excreted by the same individual on the two diets.

It is shown that the total N excreted is diminished from 16.8 to 3.60 gm.; that urea N is greatly diminished from 14.7 to 2.2 gm.; that ammonia N is but moderately diminished from 0.49 to 0.42 gm.; that uric acid N is diminished one-half, from 0.18 to 0.09 gm., and that kreatinin N is practically unchanged in the total amount excreted. It follows that the percentage relation of the different N bodies is relatively altered—with the marked diminution alone of the urea N.

With the $SO_3$ output, inorganic $SO_3$ corresponds in fluctuation in the two diets with urea, ethereal $SO_3$ with uric acid, and neutral $SO_3$ with kreatinin.

If one will compare the table of analyses of urine in the reports of Chittenden and Folin they will be found to correspond in the main in reference to the N output. Chittenden's observations were made on individuals over a sufficiently long period of time to show that the result is definite, and Folin's more complete estimation of the different forms in which N is excreted and the relation of one to another affords us data on which a fundamental theory of metabolism may be considered.

There are at present two theories of protein metabolism. According to Voit, protein of the food circulates in the blood and plasma of the tissues, and is there katabolized without becoming an integral part of the cells. Essentially this constitutes chemical decomposition of the protein in solution. The small part of the living cells which dies is dissolved in the circulating medium and becomes a part of the protein derived from the food.

Pflüger's theory is that the circulating protein of the food is first transformed into bioplasm, becomes a part of the living cell and as such is oxidized. Pflüger admits that a part of the protein may be katabolized in solution according to the theory of Voit.

The theory of Pflüger involves an enormous building up of bioplasm, coincident with an equal destruction of tissue. Both theories involve the katabolism of all of the protein of the food, in the tissues where they are utilized.

As Folin says, no fundamental theory concerning protein metabolism can be accepted unless it can be made to harmonize with the laws governing the composition of the urine.

The theories of Voit and Pflüger are based on the assumption that quantitative changes in the total protein metabolism produce no appreciable effect on the percentage composition of urines, representing such metabolism. As announced by Folin, changes in the total amount of N and S eliminated in the urine show a pronounced change in the percentage composition of the N and S.

This seems to prove that katabolism of protein food must be of at least two kinds. The nature of the changes in the distribution of the urinary constituents seems to warrant the statement that the two forms of katabolism

2. Amer. Jour. of Physiol., vol. viii, No. 2, p. 118.

are independent. The one is variable in quantity, as represented by urea and inorganic sulphur, the other is constant and yields kreatinin, neutral sulphur and to some degree uric acid and ethereal sulphates.

As is shown in the urine analyses, the more the protein of food is diminished, and therefore katabolism reduced, the more prominent relatively become kreatinin and neutral sulphur the representatives of the constant katabolism.

It has been proved that kreatinin elimination is not diminished, and that some other constituents are but slightly reduced when practically no protein food is given. This shows that there is a constant tissue waste, varying possibly in degree with the wear and tear incident to work, and shows that a certain amount of protein must be furnished with the food to maintain nitrogenous equilibrium.

In other words, katabolic processes which yield the end products that are a constant quantity under varying amounts of proteid food, represent the metabolic processes that constitute an essential part of the activity which distinguishes living from dead cells.

Folin distinguishes the constant protein metabolism, a tissue or endogenous, and the variable protein as an exogenous or intermediate metabolism. The constant metabolism fixes a limit to the lowest attainable level of nitrogenous equilibrium. Just what this level is will depend on how much, if any, urea is derived from the same katabolism which produces kreatinin. When this shall have been determined we shall possess a formula, expressing the point of lowest attainable protein katabolism, because at this point the percentage composition of the nitrogen and sulphur of the urine will be constant. It is plain that a sufficient amount of protein food to maintain the constant protein metabolism will be absolutely necessary.

The existing theories assume that protein metabolism is essentially an oxidation, and that the greatest amount of katabolism takes place in the muscles where the greatest amount of oxidation exists, i. e., the same chemical processes as those which katabolize the fats and carbohydrates.

Folin makes it clear that the splitting of the protein molecule may be more easily accomplished by hydrolysis than by oxidation.

Urea is not found in the muscles except in very small traces. Its absence in the muscles where the greatest katabolism takes place has heretofore not been explained. On the other hand, kreatin is found in the muscles, and its derivative kreatinin is a constant quantity in the urine.

If the katabolism of proteids represented by urea does not take place in the muscles, then it must be that the nitrogen katabolism which yields urea must take place elsewhere by special chemical processes. Furthermore, we are forced to the conclusion that this katabolism is not of such fundamental importance as that which yields kreatinin. It is known that in the digestion of protein, ammonia is directly formed by proteolytic ferments, and that the liver is capable of converting ammonia into urea. It is known, too, that the blood passing from the intestines to the liver contains two or three times as much ammonia as the blood in the hepatic veins.

Furthermore, there is evidence that hydrolytic decomposition of protein occurs in the digestive tract. The first step in the process is the decomposition into proteoses, amido acids, ammonia and possibly urea. Hydrolysis is carried further in the mucous membrane of the intestines, and is completed in the liver, each splitting being such as to further the formation of urea.

By this means the unnecessary nitrogen is removed, and it explains the fact that the animal organism tends to maintain a nitrogenous equilibrium within the wide limits of forced feeding, on the one hand, and of low protein food experiments on the other.

An excess of protein in the food is not stored up in the body as such, for the actual need of nitrogen is very small, as it is limited to the actual building up of the cell bioplasm. It is not necessary to store it in the body, because an excess of nitrogen is always furnished with the food. A larger nitrogen intake than is necessary to meet the needs of endogenous metabolism will lead only to an increase in the elimination of urea. It can not increase the tissue metabolism and the resulting formation of kreatinin.

The katabolism of fats and carbohydrates is accomplished chiefly by oxidation. The process sets free a large amount of heat, which may be converted into mechanical energy. In the removal of nitrogen from protein by hydrolysis but little energy is expended. The non-nitrogenous rest of proteid decomposition by hydrolysis affords a substance which may be further partly converted into fats or carbohydrates. It then becomes subject to the same laws governing the katabolism of fats and carbohydrates. The organism may at any time be made to store up fats and carbohydrates, if an excess over the requirements is taken. It has already been stated that this excess may be taken without fear of poisoning the body, because the waste from them consists of non-crystallizable products. An excess may overburden the digestive organs and cause abnormal fermentation or tire out the glycolytic function. Too large a deposit of fat may render the body unwieldy and may infiltrate and physiologically embarrass the muscles and viscera.

### NITROGENOUS EQUILIBRIUM.

The above theory of metabolism of Folin explains the persistent tendency of the normal body to maintain nitrogenous equilibrium when a large amount of proteid is consumed, even when this involves the formation of an excessive amount of urea.

If one will examine the tables of the feeding experiments made by Folin and compare the nitrogenous output on the low protein diet with the nitrogen excreted in the urine on a resumption of a free amount of protein in the food, it will be seen that the elimination of nitrogen was more than doubled on the first, and on the second day there was more than three times as much excreted as on the last day of the low protein diet.

Folin offers the following explanation:

> All the living protoplasm in the animal organism is suspended in a fluid, very rich in protein, and on account of the habitual use of more nitrogenous food than the tissues can use as a protein, the organism is in possession of approximately the maximum amount of reserved protein in solution that it can advantageously retain. When the supply of food protein is stopped, the excess of reserve protein inside the organism is still sufficient to cause a rather large destruction of protein during the first day or two of protein starvation, and after that the protein katabolism is very small, provided sufficient non-nitrogenous food is available. But even then, and for many days thereafter, the protoplasm of the tissues has still an abundant supply of dissolved protein, and the normal activity of the muscles is not impaired. When 30 or 40 gm. of nitrogen have been lost by an average-sized man during a week or more of abstinence from nitrogenous food the living muscle tissues are still well supplied with all the protein they can use. This is proved by the unchanged kreatinin elimination and by the fact that the individual feels no unusual fatigue or inability to do the customary work.

The organism at the end of a low protein diet experiment still has an abundance of available protein in the nutritive fluids, and this is why it only gradually and only under the pressure of an excessive supply of food protein again acquires the original maximum store of this reserve material.

Based on the above interpretation of metabolism and nitrogenous equilibrium, the so-called standard diets are unnecessarily rich in proteids. It is necessary to supply protein in the food in sufficient amount to provide liberally for the endogenous or tissue metabolism and to maintain a reserve protein in solution. If the blood is in need of tissue builders, the organism can rapidly assimilate large amounts of nitrogenous food. This is clearly shown in emaciated conditions following fevers, surgical operations, etc., for during convalescence there is often a ravenous appetite and a rapid increase in weight and strength with a corresponding retention of nitrogen.

The main contention of Voit and others is that it is necessary to consume 118 gm. of proteid daily in order to maintain a nitrogenous equilibrium and at the same time preserve a condition of health and mental and physical efficiency.

The experiments of Chittenden are so decisive that a proteid rich diet is proved not to be necessary. He is unquestionably right in the conclusion that the standard diet may be divided by two, as far at least, as the proteids are concerned.

The practical results of the experiments of Chittenden are made more rational and clear by the researches and deductions of Folin.

### THE DAILY DIET.

Chittenden maintains that the daily requirement is not only much less of protein than that recognized in the standard diets, but that the fats and carbohydrates also may be considerably diminished.

We recognize the fact that the diet must differ for individuals, dependent on the occupation, the season of the year, the climate, etc. However, the modification in the diet will consist chiefly in the variation of the amount of fats and carbohydrates rather than a change in the quantity of the proteid. Folin has shown that physical activity does not cause a material tissue waste of muscle, for kreatinin is not appreciably increased in the urine by physical labor. The growing individual and the emaciated convalescent only can utilize a large nitrogen intake and retain it. The difference in the dietary of grown normal individuals will consist mainly in the fuel foods—the fats and carbohydrates.

The achievements of the Japanese on a diet chiefly carbohydrate is sufficient proof that a high efficiency, both mental and physical, may be maintained on a low proteid and full fuel diet.

If a large proteid diet is unnecessary, is it also detrimental? In the light of the theory of exogenous metabolism of Folin, an excess of proteid furnished with the food is normally rapidly converted into harmless urea and is quickly eliminated by the kidneys.

The excessive production of uric-acid, xanthin bases, kreatin and other so-called extractives is looked on as the cause of gouty and other so-called autointoxication diseases. The excessive production of these substances is usually ascribed to an excess of proteid consumed. These substances are the result chiefly of the endogenous metabolism, and, scientifically speaking, have no relation to an excess of protein, for that substance is converted into harmless urea. However, the meats contain considerable extractives or substances out of which they may be formed, and therefore an excess of concentrated protein food in the form of meat may result in such an autointoxication. The continued excessive use of protein may lead in time to the accumulation of a larger amount of reserve protein than the organism can retain in the fluid media. The continuous presence of such a large unnecessary supply of unorganized reserve material may weaken one or all of the living tissues.

We are the creatures of habit. With palates craving for new sensations and the prevalent belief that hearty eating promotes health and strength, it is no wonder that we eat too much. It is proper, too, that the pleasures of the palate should be gratified. The pleasure which eating affords promotes digestion. Bolting does not permit proper enjoyment of food. Thorough mastication undoubtedly makes the palate more discriminating and serves as a check to overindulgence.

Chittenden says: "Physiologic economy in nutrition means temperance and not prohibition. It means full freedom of choice in the selection of food. It is not a cereal diet nor vegetarianism."

Practical application of the newer ideas of metabolism and nutrition to diets in disease could be readily made, but are outside of the limits of this paper.

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## METHODS, VALUE AND LIMITATIONS OF THE KNOWLEDGE OF THE GASTRIC CONTENTS.*

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I think it will be admitted that instrumental and laboratory examinations with reference to the stomach are unduly neglected in practice. The reasons for this are similar to those that cause the neglect of other diagnostic manipulations—technical difficulties, real and imaginary, and erroneous views as to clinical value. Many fail to make examinations of stomach contents solely because they think the passage of the stomach tube is difficult and often objected to by the patient. Contrary to this view, I find very few people who require any persuasion and still fewer who offer serious verbal or physical difficulty. Out of many thousands examined, I have encountered only two people in whom I could not successfully use the stomach tube at the first trial. I am not considering, of course, the very important contraindications to the use of the tube (necessary to remember in every case), or real obstructions to the passage.

A belief in the excessive technical difficulties of the examination of the stomach contents depends chiefly on lack of training and of practical experience in the necessary manipulations, which are not essentially as difficult as some of the methods proposed may indicate. An important cause of neglect comes from disappointment at the results. Those who expect to make complete and satisfactory diagnoses from single features, as Bright's disease from albuminuria, diabetes from glycosuria, or pneumonia from crepitant râles, discard gastric diagnostic methods when they find out that absence of free HCl does not positively mean cancer. We still find evidences of a belief in the existence of diagnostic signs, in the advocacy of tryptophan reaction, and others, but

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the probabilities are that in stomach diagnosis, as in other lines, the greatest assistance will come from patient efforts to appreciate the alterations of function and structure primarily, and by allowing our diagnosis to grow out of these findings, assisted by the other clinical features of the case. An appreciation of gastric physiology confirms this *a priori* view. The important rôle of HCl in the stomach contents suggests in the very beginning the usefulness of an examination into the presence, amount and condition of this, whether partly free or only combined or absent. Clinical experience, I think, confirms this, but there are many who fail to realize it. Thus it happened that at an early period, the absence of HCl in cancer of the stomach was noted, and many people grasped at this as a diagnostic feature, and even yet use it as such, although its limitations have long been abundantly demonstrated. On the other hand, some have gone to the opposite extreme, and, discovering the limitations, reject all stomach examinations as useless. Both are wrong. The absence of HCl in cancer is so frequent, and when it does exist, so constant from day to day, as to form a valuable aid, but there may be cancer present with HCl secretion preserved for a long time, even in excess of the normal amount. But such exceptions and contradictions occur in all branches of diagnosis, and should teach us to discover other details, rather than lead us to a condition of despair. I do not think it necessary at this time to give any statistics as to the relative frequency of the presence or absence of HCl in cancer; for, while interesting and valuable, they do not apply to an individual case. In the examination of a patient we can not give up a diagnosis because of a negative result in one sign. We have still to work out all the signs and only then to attempt the final diagnosis.

In gastric ulcer the excessive secretion of HCl has so often been noted that it is rightly considered one of the signs of the disease, and yet I could cite a number of cases, confirmed by operation, in which there was no excess in repeated examinations. That single or few examinations may be misleading can be shown by some cases in which variations occur, as from 26 to 88 in the course of seven tests extending over ten days. In diseases like cancer and simple ulcer there are such urgent reasons for early diagnosis that all the other diagnostic features should be used as quickly as possible whenever these diseases are suspected, and in these the complete routine examination of the stomach contents will almost always prevent error from exceptional behavior of the HCl.

The value of estimations of HCl, in my opinion, is greatest in functional diseases of the stomach, or perhaps it would be more exact to say cases in which the stomach functions are altered, without gross organic disease primarily in that organ, though there may be functional or organic disease in other organs that may have a part in the production of the gastric anomaly. These conditions are very common, much more so than is often supposed. Excessive secretion of HCl, for example, is a very common condition. While it may be associated with organic changes in the stomach, such as ulcer, spasm of the pylorus, retention, stagnation and dilatation, yet there may be no gastric symptoms, or only trifling ones, for it also occurs with distant symptoms, such as headache (often simulating ocular headache), severe neurasthenia sometimes, in the male, associated with functional impotence, and hence the cause of ill-directed and not rarely harmful treatment. Thorough examinations of the stomach, made as a routine measure, sometimes lead quickly to improvement of all the subjective symptoms. Even when the gastric symptoms are marked, test meals with complete examinations are indicated. While the picture of marked gastric hypersecretion is often very typical, I have seen cases that had not been differentiated before by other physicians, and that I could not differentiate without test meals, in which the primary conditions were just the opposite—absence of HCl with excessive production of organic acids.

There are also very troublesome cases of functional gastric disease in which the chemical conditions vary. Hypersecretion and hyposecretion or even achylia may alternate in a way only to be followed up by repeated examinations. In the case of organic diseases of the stomach, the further steps are comparatively independent of HCl determinations, but even in these occasional tests are useful. In functional diseases the greatest results often follow frequent estimations of HCl, under various kinds of dietetic and other treatment, and with various test meals. The treatment should be begun as early as possible, sometimes before the first test meal, and used as a factor in the examinations.

There is still room for further investigation in the methods of gastric chemical examinations, and those who have the proper training and facilities can with great advantage pursue such investigation. The general practitioner, however, need not be discouraged because of the possibilities of future discovery, nor prevented from carrying out the methods now available, for these are sufficiently accurate for clinical purposes and not too intricate for any one, and the application of all I shall mention does not require as much time as it does to speak of them. For the primary reaction, litmus paper should be used, and for the presence or absence of free HCl, Congo paper or solution may follow, though this can be dispensed with. Those working with it can learn much from this test. The more accurate and delicate Guenzburg's reagent should always be used. It is so delicate and exact that I can not understand its frequent neglect. This may be due to erroneous results from using a decomposed solution. The tendency to decompose is a drawback, I admit, but it is so easy to test the solution with a drop of dilute HCl that the fault is a trifling one.

Given free HCl, it is next necessary to determine its amount, and for this the dimethyl-amidoazo-benzol is most satisfactory, though it requires the usual care in practicing with test solutions to get the proper end reaction. For the total acidity the phenolphthalein reaction is used. Tests for the combined HCl are not necessary if there is free HCl, hence all of the steps of Toepfer's method are not required in ordinary clinical work. If there is no free HCl, the qualitative Sjoequist test should be applied. Quantitative estimations for combined HCl are not, in my opinion, of clinical necessity, and in order to be accurate, and hence of value, require more chemical experience than the general practitioner need be expected to have. With proper apparatus and reagents, any one can easily acquire sufficient experience in the estimation of HCl to utilize that substance in diagnosis, and with such experience the quantitative tests can often be omitted. Of abnormal or pathologic acids, lactic is the only one requiring chemical tests, for though acetic acid or butyric acid often occur in large quantities they can be detected by the odor. Lactic acid tests to be most useful should be made on a lactic-free test meal, such as shredded wheat or the Boas gruel. Quantitative meth-

ods are not necessary, as the relative intensity of the reaction with Uffelmann's or Kelling's test give sufficient indices, though Strauss' burette may be used. The determination of pepsin is not necessary in ordinary work, since pepsin is rarely absent when HCl is present in sufficient quantities, but the method of Mett is often a useful addition to other tests in obscure functional diseases. It is fairly easy to work, and, with the valuable details regarding time-limit worked out by my colleague, Dr. Cowie, requires very little time. The existence of the digestive functions and their relative completeness can easily be shown by the biuret and starch tests, and by the changes in the cells of the gastric contents as observed in the microscopic examination. At the same time the experimenter may have his attention called to the advantage of further work with the functional tests proposed by Sahli, some of which promise useful additions to our diagnostic methods.

If I have spoken of chemical tests first it is not because I look on these as all-sufficient, but rather because they are simple and the results are easily expressed in figures or symbols; but without other observations they are of little or no value. The other tests require practical knowledge and experience. Nevertheless they will repay one the time spent in becoming familiar with them either in a clinical laboratory under the supervision of an expert or worked out with the aid of textbooks and clinical material without such supervision. One quickly learns the normal limits regarding the amount, color, consistency and odor of the gastric contents. From these the need of further examinations becomes quickly known. An excess of mucus can also be recognized, and along with this, the fact that it is not always easy to draw a positive conclusion from such an excess. In the first place, it is always important to exclude an origin from the nose, pharynx or bronchi; in the next place it is necessary to be sure that the excess has not been caused by awkward manipulation of the tube, even if unavoidable. But even if we can exclude such factors, it is important to remember that the presence of even considerable mucus does not warrant a diagnosis of chronic gastritis. Blood is easy to recognize when present in large amounts. Small quantities of blood, due to scratching with the end of the tube, are usually easy to recognize. The tests for occult blood developed in the last few years are of considerable clinical value, though it is, of course, necessary to exclude traumatism. The presence of pus is always important, but here, too, we must be able to exclude an origin from the respiratory tract. The appearance of the other cells mixed with the pus, dust pigment and also a greater variety of bacterial forms than occurs in stomach contents, serve to differentiate. The examination of bits of mucosa is not of very great clinical value. In about one-third of the cases in which such specimens have been examined in my clinic, the microscopic examination of the bits coincided with the other findings. But, on the whole, such examinations do not repay the time spent on them, for purposes of practical diagnosis. The examination of the bacteria in the stomach contents is of only limited value. Staining is rarely necessary, though the Wright stain is easy to apply, and stained preparations will be preferred by those who have not had considerable experience with fresh material. Large numbers of bacteria in the stomach contents, however, throw an important light on the question of stagnation, and there are certain variations in the flora in different cases that are of a good deal of aid in diagnosis. So the Oppler-Boas bacillus, and, on the other hand, yeasts and sarcinæ, often occur in such large numbers as indicate pretty accurately the chemical and anatomic alterations present. Protozoa also have only a limited diagnostic value, but their occurrence in the stomach is interesting, and the study of cases in which they occur may throw a good deal of light on hitherto obscure processes in that organ. The testing of the freezing point of stomach contents or of its surface tension may furnish a useful possibility of work for those who have time, but at present these possibilities are not necessary for clinical work.

In conclusion, my opinion is that examinations of the gastric contents give information that can not be obtained in any other way, and, though often negative, can not be excluded without risk of serious error. Such examinations are indicated in all stomach syndromes, in all diseases seriously affecting metabolism and nutrition, and in all diseases that affect the function of the stomach, notably diseases of the lungs, heart, liver, kidneys and blood.

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## CERTAIN NON-GASTRIC DISEASES WITH GASTRIC SYMPTOMS.*

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The subject is so vast that a certain amount of abruptness is necessary in the presentation. Some of the minor non-gastric diseases with gastric symptoms may be omitted. The question is a study in etiology. In one sense it may be said the account is to include gastric disorders which are secondary to other diseases. It is not to gastric disorders, but to diseases, remote from the stomach, which have gastric symptoms, that we call attention. Strictly speaking, the gastric symptoms are not due to any organic disease of the stomach; but such division is largely arbitrary. No pronounced gastric symptoms are liable to prevail without either irritation, congestion or inflammation, whether the symptoms are temporary or permanent.

It is understood, then, that the ailments considered are those which have for their chief, and for the time dominant, expression, gastric symptoms; it is the class to which, in loose terms, we say it is not your stomach, but your eyes, or your lungs, or your kidneys that are at fault. The patient's sensations direct him to the stomach alone. We must clearly understand that, although we decide that the gastric symptoms are the minor factors, from the standpoint of therapeutics, we must direct treatment as boldly to their alleviation as to the primary disorder. The eyes may be corrected, but the gastric symptoms only mitigated.

### NON-GASTRIC ORGANIC DISEASES PRESENTING GASTRIC SYMPTOMS.

*The Eyes.*—The subject is familiar to all. Who has not seen correction of errors of refraction relieve so-called "bilious attacks," periodical vomiting, anorexia, indigestion and other gastric symptoms? The cure of grave organic ocular defects relieves similar gastric conditions.

*The Ear.*—The vomiting of middle-ear disease, of disease of the attic and of auditory-nerve affections is well known.

*The Nose and Throat.*—Morning nausea, loss of appetite and chronic dyspepsia secondary to the pharyngi-

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tis of smokers, occurs to all. The gastric disorders of adenoid disease must also be emphasized.

*Nervous System.*—I can refer only to the gastric crises of locomotor ataxia; the gastric symptoms of bulbar palsy; the occurrence of vomiting, often for six hours before an attack of apoplexy;[1] the vomiting of meningitis, tubercular and cerebrospinal; the gastric symptoms of brain tumor, and those which precede a fully-developed epilepsy. The call can not be too loud to this latter ailment. Such incidents as periodical attacks of indigestion or of vomiting may precede or attend obscure forms of epilepsy. Patients with the peculiar chewing and rumination in that form of epilepsy to which Spiller has recently called attention are usually treated for stomach disorder. The nocturnal and intermittent character of the attacks, the clinical course and the occasional occurrence of a true attack, with other suggestive symptoms, such as the aura, somnolence and forgetfulness of the event, suggest the true nature of the affection. In children, the occurrence of gastric symptoms, admittedly not of local origin, must demand an examination of the nervous system.

*The Cardiovascular System.*—The acute affections may have epigastric pain and vomiting as sole expressions of the disorder.[2] More pronounced and continuous are the gastric symptoms, often dominating the picture, in failure of compensation. It is not infrequent that dyspnea, palpitation, cardiac pain or dropsy are absent, and yet dilatation of the heart and secondary portal congestion are present and cause gastric symptoms, as pain, vomiting, hemorrhage, loss of appetite, and symptoms of catarrhal gastritis, as the only symptoms of the heart disease. Many patients with dyspepsia and gastritis may be cured with digitalis.

*The Lungs.*—Apex pneumonia (pneumococcus infection) and tuberculosis are examples; and, in children with severe vomiting, the possibility of the former infection should be borne in mind.

*The Liver.*—Organic disease and cholelithiasis have their gastric symptoms.

*The Intestines and Appendix.*—The recent literature is replete with information and common experience leads to an investigation of these structures in acute and chronic gastric disorders.

*The Genitourinary Tract.*—The gastric manifestations are well known. A renal calculus, an acute or chronic nephritis, may have vomiting, nausea, anorexia or the gastric neuroses as most marked symptoms. Is not uremia often attended by gastric symptoms only?

*The Blood.*—Iron cures many, many patients with gastric disorders. The perverted appetite and the nausea and vomiting of chlorosis are familiar.

*The Infections.*—I shall only call attention to the importance of the possible occurrence of gastric symptoms alone in the early periods of the eruptive fevers. Time compels exclusion of uncinariasis, malaria and other infections, and admits of only a word regarding tuberculosis, gonorrhea and syphilis. Tuberculosis must never be excluded as a possible factor in the production of gastric symptoms. Who has not seen advanced phthisis treated in the early periods of disease for gastric symptoms alone? In young adults, the temperature alone may guide us to a conclusion.[3] The causeless anorexia, the dyspepsia, the morning nausea, and the vomiting may attend early tuberculosis and precede pulmonary symptoms and physical signs. Syphilis is often marked by gastric symptoms, independently of the medication which often causes them. Gonorrhea requires more than a passing notice. In late adult and in early middle age, toxic gastric symptoms occur and continue unrelieved until, if possible, the deep urethral infection or prostatic infection is cured. The history and the urine may disclose the cause.

*The Intoxications.*—To the toxemia of the infections we must add those due to tobacco and to lead, as in the achylia of plumbic gastritis, as pointed out by Sailer. The objective signs of lead poisoning may be most obscure. Exophthalmic goiter gives rise to pronounced symptoms of gastric character alone, the other phenomena being in abeyance. Protracted vomiting may be of such origin and require careful examination to disclose the source. The presence of pus somewhere will give rise to gastric symptoms, and I have long taught that anorexia is often due to internal suppuration.[4] Addison's disease may cause toxic gastric symptoms while uremia is a classical cause.

### NON-GASTRIC CONDITIONS ATTENDED BY GASTRIC SYMPTOMS.

To this division belong that very large class of cases to which the term gastric neurosis is applied. Gastric symptoms may be the only manifestation of hysteria and of neurasthenia. The gastric neuroses are the most difficult to understand. Unfortunately time forbids any complete discussion.

### ACUTE GASTRIC MANIFESTATIONS SIMULATING PRIMARY ORGANIC GASTRIC DISEASES OR ACUTE PHASES THEREOF.

In these days of surgical alertness it must be borne in mind that acute surgical affections of the stomach may be simulated by a symptom-complex caused by disease elsewhere.

*Cirrhosis of the Liver.*—Gastric incidents in its course, as pain, vomiting and hemorrhage, acute in onset, may simulate gastric ulcer, with or without perforation.

*Uremia.*—Epigastric pain, vomiting, hemorrhage and collapse may occur, simulating gastric ulcer and perforation.

*Locomotor Ataxia.*—The gastric crises simulate acute gastric lesions and may appear like ulcer.

*Gastric Neuroses.*—The gastric neuroses of hysteria, neurasthenia and epilepsy simulate ulcer at times.

### DIAGNOSIS.

Non-gastric diseases with gastric symptoms can only be recognized after an examination of all the organs of the body and a study of all excretions and secretions. The clinical course and the historical features are essential. The symptoms bear more or less relation to physiologic or pathologic fluctuations of the primary source of the disease, as of the eye, heart, kidneys, etc., and are not of the constancy of organic disease of the stomach. The gastric neuroses are inconstant as to character, irregular as to manifestation, both subjective and objective, and have a relation to emotional or psychic influences which require all the skill, genius and patience of the practitioner accurately to disclose.

1. "Some Clinical Aspects of Vomiting," Univ. Medical Magazine, Nov. 1889. Read before Amer. Med. Assoc., Newport, 1889.
2. "Abdominal Pain," Amer. Med., March, 26, 1904. Read before N. Y. State Med. Assoc., Albany, Jan. 26-28, 1904.
3. "Gastric Symptoms of Tuberculosis." J. H. Musser.
4. "The Gastric Disorders of Pulmonary Tuberculosis," University Medical Magazine, July, 1891.

# FOOD STAGNATION FROM ALL CAUSES.*

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When the stomach fails to empty itself within a reasonable time after the taking of food, this condition is termed food stagnation. It differs in degree, depending, in part, on the character of the food taken, still more on the morbid state giving rise to the condition. Semi-liquid or pultaceous food should leave the stomach in four or five hours, and if it is retained longer there is a certain degree of stagnation. An ordinary meal composed of a variety of foods is the proper test for food stagnation. With this meal the stomach should be emptied, according to Riegel, within seven hours, and the presence of contents beyond that time is evidence of food stagnation. There are conditions, however, in which the liquid food is retained for a much longer period than five hours, and solid foods are retained for twenty-four hours or longer. Under such circumstances, we have to deal with more serious cases.

## ETIOLOGY.

Food stagnation is one of the most important of the gastric disturbances. It invariably gives rise to symptoms both local and general. Locally, the patient experiences distress and a sense of weight, sometimes pain, together with eructations of gas, regurgitation of the stomach contents, and often vomiting. In certain cases the stomach behaves in a lifeless, inactive manner; in other cases it takes on violent movements which the patient may feel and which the observer may perceive through the abdominal parietes. Constitutionally, there are usually found evidences of autointoxication and starvation. These symptoms vary widely in different cases, depending on the degree of stagnation and on the character of the fermentation that may be present. The nature of food stagnation differs, as does its cause, and many conditions may lead to it. Cases may be roughly divided into two classes: First, those in which stagnation results from depression of the motor function of the stomach, without the presence of any actual obstruction. The stomach walls are simply too feeble to overcome the slight retention, or holding back, exercised normally by the pylorus. Second, those in which there is actual obstruction to the outflow of stomach contents, regardless of the kinetic energy of the gastric walls. There are certain cases in which we have to deal both with atony of the gastric walls and with obstruction at the pylorus. More often these cases begin with obstruction and the atony appears as a secondary matter.

Food stagnation is often associated with dilatation of the stomach, but on the other hand, there may be a large stomach without stagnation, and there may be very marked stagnation without gastrectasis. It is for this reason that Einhorn prefers to use the term ischochymia in the description of many cases formerly classified as ectasy, and it is this view which has led to the discussion of food stagnation as an entity; whereas, it was in former times almost invariably spoken of as an attribute of dilatation of the stomach.

Of the cases of the first class, anything which leads to the weakening of the muscular layer of the stomach may act as a cause. It, therefore, follows some cases of gastritis when the inflammation has invaded the muscle layers. It results from degeneration of the gastric muscle from any cause, and, therefore, occurs in grave anemias, inanition, severe intoxications and infections. It occurs in cases of great depression, more often when this is prolonged, sometimes when it is brief, but acute, as in surgical shock, even though the stomach itself is not involved in trauma, or operation. I have known it to occur in acute illnesses without previous history of stomach trouble. Occasionally it appears to be congenital, and there are instances which seem to be hereditary and in which it occurs in a number of individuals of the same family. It may follow from adhesions to the stomach, thus making expulsive efforts ineffectual. It may result from imperfect innervation, and this may occur in consequence of general or local nervous depression. It most often results from overtaxation of the stomach; for instance, from eating or drinking excessively, especially the former, or from eating very coarse foods. This cause is naturally most operative when the functions of the stomach are depressed and systemic energy is on a low plane. The condition is, therefore, not infrequently induced by feeding abundantly too coarse food to convalescents. I have known it, for instance, to occur from overfeeding during or after typhoid fever. I knew a fatal case which followed the taking of a Christmas dinner by a convalescent from pneumonia. In every-day practice we most often find this type of food stagnation developing in people of lowered energy, such as is produced by overwork, mental or physical, excessive venery, etc., who at the same time are indiscreet in the quantity and quality of food taken.

As to the second class of causes of food stagnation, the most common is cicatricial pyloric stenosis, secondary to gastric ulcer. This sometimes arises from healed and sometimes from active ulcer, and chronic irritation or inflammation at the pylorus occasionally leads to the same result without the intervention of ulcer. There are a few instances in which we have to deal with benign hypertrophy of the pylorus with exaggerated action of the pyloric sphincter, giving rise to a palpable tumor and to disharmony between the detrusor and the sphincter apparatus of the stomach, the nature of which hypertrophy is not well understood. In some there is a congenital hypertrophy of the pylorus which may lead to fatal vomiting in the new-born, or later in life may develop into incoercible vomiting. A frequent form of obstruction is found in pyloric spasm, the result of oversensibility of the pylorus, either from erosions of the mucosa or simply from nervous hyperesthesia, more often associated with hypersecretion and hyperacidity of the gastric juice. In other words, the condition is found in gastrosuccorrhea and in hyperchlorhydria. The trouble may result from perigastritis with contracting adhesions, from band-like adhesions constricting the pylorus or duodenum, or from pressure exercised by tumors, or other processes, on these parts. The obstruction may occur some distance below the pylorus, thus giving rise to stagnation of the duodenal contents, as well as the contents of the stomach. Cancer of the stomach is a common cause of the conditions. Before a palpable tumor appears, there may occur spasm of the pylorus arising from its irritability. This may at first be transient in character, thus misleading the clinician. Gastroptosis, with the sharp bend in the pylorus or duodenum, is sometimes a cause, but its actual occurrence must be very rare.

## MORBID ANATOMY.

The morbid anatomy of motor insufficiency of the stomach varies according to the nature of the case. In

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the early stages of gastric atony no change will be found in the structure. In advanced cases the stomach is likely to be found dilated, with more or less thinning of and, perhaps, fatty or fibroid degeneration of the muscle walls. The mucous membrane frequently shows the evidence of chronic gastric catarrh, with fatty or fibroid changes. When the stomach dilates, it is not always in the same direction, but is in the line of least resistance. More often the enlargement occurs around the greater curvature and fundus, although it may be at the antrum pylori or even upward toward the diaphragm.

### DIAGNOSIS.

The diagnosis of stagnation is not difficult; it may be suspected when patients complain of eructations of food taken a long time previously. It can be demonstrated only by the use of the stomach tube. If the greater part of an Ewald test breakfast is found present three hours after eating, a moderate insufficiency is present, or if the stomach is not emptied seven hours after a hearty mixed meal the same conclusion is reached. The degree of food stagnation may be inferred from the amount of food found present; that is to say, if the stomach is found nearly empty, the insufficiency is small in degree; if, however, the greater part of the meal remains, the extent of the disability should be measured accordingly.

It is a good plan to examine the stomach in the morning, fasting. If the usual evening meal has been taken, and the stomach is found empty in the morning, the stagnation is not great. In most cases, in addition to the estimation of the motor insufficiency of the stomach, one passes to an examination to determine the size and position of the organ and to ascertain the state of the gastric chemistry. These features, while having an important bearing on the individual case, are not necessarily related to the food stagnation. Nevertheless, every case in which food stagnation occurs should have the most complete examination, not only in reference to the stomach, but to the organism as a whole. There is a very close relation between the systemic and gastric conditions.

### TREATMENT.

The treatment of food stagnation or motor insufficiency is a broad subject and can not be fully discussed at this time. There are some principles which are so important that they should receive attention to the exclusion of details. In the first place it must be remembered that gastric atony may be but a part of a general atony, and gastric weakness but a part of general weakness. On the other hand, there are cases in which the organism seems strong, but in which the motor power of the stomach is insufficient, and this without any unusual obstruction. Whether the atony is limited to the stomach or but an expression of the general debility, it is always of the utmost importance to manage the organism as a whole so as to increase energy and prevent its dissipation. In those cases where the stomach seems alone involved in the muscular weakness, local attention is, of course, especially demanded. The motor power may be assisted by certain mechanical measures, especially by really skillful massage over the region of the stomach, by trunk rotation and flexion, and by the alternate hot and cold douche over the epigastrium, and by external and internal faradization. The alternate hot and cold douching through the stomach tube has seemed sometimes to do good. As for drugs, undoubtedly benefit follows the use of the simple carminatives, bitter infusions, and temporarily the diffusible stimulants. These measures must be modified according to whatever other condition may be associated with the motor insufficiency; as, for instance, catarrhal gastritis, carcinoma, ulcer, ptosis, etc. It should here be reiterated that failure or success depends more on general management of the patient, on proper rest, exercise, recreation, diet, mental state, etc., than on the mere local treatment of the stomach. Of course, both must receive consideration.

Surgery has little place in this form of motor insufficiency. As for those cases depending on obstruction, surgical intervention is often of the utmost value; yet I can not agree with the dictum that all such cases are suitable to surgical relief. Where it depends on spasm of the pylorus from overirritability of tissue, whether from hyperchlorhydria, hyperesthesia, or simple erosion of the pyloric mucosa, surgery ought not to be considered; yet I have known these cases sent to the surgeon. There is no artificial drainage of the stomach which compares in efficiency with the normal. The proper treatment consists in lowering the acidity of the gastric secretions, soothing the gastric mucosa and the selection of an unstimulating liquid or very soft diet which is free from all irritating particles. Lavage followed by soothing lavements of the mucous membrane is of great assistance. I have seen cases, which at first suggested serious organic disease of the pylorus, improve promptly under this treatment and know that the patients have continued without disturbance for years afterward. When there is ulcer at the pylorus, the question is more difficult. The present tendency, of course, is to operate at once, and ulcer of the pylorus is an ugly affair; yet in some cases in which the ulcer is small and yields readily to treatment it is probably wise to follow the conservative method, keeping the case for a while under observation before resorting to a gastroenterostomy. We are beginning to find out that a stomach on which a gastroenterostomy has been performed is by no manner of means as good as a normal stomach. If, however, the ulcer continues to give trouble, if pain and spasm frequently recur, I would recommend pyloroplasty (if the ulcer can be safely excised), otherwise gastroenterostomy. In benign hypertrophy of the pylorus without ulcer, I advise operation, preferably pyloroplasty. When there is cancer of the pylorus, excision followed by gastroenterostomy is probably, on the whole, the wiser course. If there is extensive involvement, gastroenterostomy alone often allows a year or more of comparative comfort to the patient. I have seen some brilliant results, but more depressing failures. Of the latter, it is only fair to say that by the operation there is little to be lost and possibly a year to be gained. In atonic cases, especially when associated with ptosis, some benefit follows from change of posture; and at times Revsing's or other operations that raise the distended fundus, thus enabling the organ to drain, are of use.

Something should be said as to vomiting in this condition. It is often a most conspicuous symptom, but varies much in its characteristics in different cases which appear to be of the same kind. Occasionally vomiting occurs only when the stomach is overdistended; at other times there are periods of great gastric irritability, with retching, even when the stomach is empty. In obstructive cases the nausea and vomiting often depend on yeast fermentation, and, with the exception of lavage, nothing gives so much relief as salicylic acid, which overcomes the yeast fermentation. Even when lavage is indicated, the relief afforded is greatly enhanced by the addition of this drug.

In closing this question of treatment, may I reiterate

the feeling, which grows stronger the wider the experience, that it is impossible to expect the best results in dealing with this, as well as other stomach diseases, from purely special methods of treatment. The debt which we owe to those who have specialized in gastric diseases is immense, but the long-continued study of cases shows that, while we should avail ourselves of the art of the specialist, we can not dispense with the wide knowledge of general pathology and therapeutics which is the possession of the high-class general practitioner.

## DISCUSSION.

ON PAPERS OF DRS. BILLINGS, DOCK, MUSSER AND STOCKTON.

DR. RICHARD C. CABOT, Boston, asked Dr. Stockton on what grounds he would be willing to state, in any case, that there is an abnormal amount of mucus in the stomach contents. He also asked Dr. Musser if he could give any figures showing what proportion of all cases coming to him with stomach symptoms really have stomach disease.

DR. G. W. MCCASKEY, Fort Wayne, Ind., declared that to say that in a certain sense the disorders of the stomach are fundamentally more important than those of other organs of the body is to utter the merest platitude. Gastric disease frequently stands in causal relationship to a large group of diseases, renal disease being among them. It is true that perhaps in the majority of such cases the intestines are the organs directly at fault; but if one traces the causes further back the ultimate cause will frequently be found to arise in gastric disease. Dr. McCaskey believes this to be true in a very large proportion of the cases. Abnormal gastric conditions may lead to imperfect intestinal function. He emphasized in particular the necessity of a thorough comprehension of the physiology of the stomach before attempting to understand its diseases. This is not peculiar to the stomach, but in no other organ is it more fittingly illustrated. If, for instance, certain well-known facts regarding the physiology of the stomach had been taken into consideration, the dictum that the presence of hydrochloric acid excluded cancer would never have been made. There can be advanced cases of cancer of the pylorus (in which there are no acid-forming cells) without any diminution of the secretion of hydrochloric acid; in fact, it is liable to be increased at first as a result of the stimulation of the organ by the neoplasm. Many such cases have been reported, and Dr. McCaskey added one to the list within the last few months.* It seems to him that exaggerated conclusions have been drawn during the past few years in papers which have appeared on the subject of food stagnation. In one, for instance, an attempt was made to set the limit of twelve hours beyond which limit if food was found it indicated organic disease, in which operative interference was to be considered. In Dr. McCaskey's opinion much severer grades of gastric myasthenia are amenable to medical treatment. He is in accord with the conservative position taken by Dr. Stockton. Dr. McCaskey has found in a large proportion of the cases that intragastric cold douches do not agree with the patients. He does not know precisely why, but possibly it is because of the close proximity of the stomach to the solar plexus, or perhaps some peculiar susceptibility of the nervous organization of the stomach to the depressing action of cold. The importance of stomach analyses appears to him to be very great, and he endorsed and emphasized practically all that Dr. Dock has said. The recent attempts to belittle gastric chemistry are not well founded and are greatly to be deplored. He differed with Dr. Dock in the use of the Gunsberg reagent as a qualitative test for free HCl. He considers a 1 per cent. solution of resorcin much preferable because of its greater stability. Its delicacy is precisely the same, but no greater than that of the Guenzburg reagent. The questions of general nutrition discussed by Dr. Billings are of vital importance from the practical quite as much as the theoretical point of view. The problems of proteid metabolism are exceedingly difficult, and as yet are impossible of full solution. It seems quite probable that the existing dietetic standard with relation to proteid intake is somewhat too high, but just how much does not seem to Dr. McCaskey to be established. There is no doubt, however, that the nitrogen balance can be maintained and the organism kept in good working condition on much less than that indicated by the Voit standard, but it seems that we are not at present justified in accepting a standard less than 80 grams of proteid per diem for the average individual of about 150 pounds weight. The investigations of Richardson and Folin are suggestive in the highest degree, even if their conclusions are not final, as it seems to Dr. McCaskey that the time over which the experiments ranged, even though of several months' duration, is not long enough to give final results. Even though body weight is maintained at a slightly lower level than before, and the working capacity of the individual remains up to the average, there are still other questions unanswered: the resistive power, for instance, of the individual to morbific influences; and the problem may even go further and be racial in its character. One fact should be clearly emphasized, and that is that the proteid intake should not vary with muscular exercise to the same extent as the carbohydrates. The latter are the force-producing, dynamic portion of the diet, and the quantity should rise and fall with the amount of muscular work done. The laboring man needs more starch and sugar and fat, but not necessarily a great increase in meat or other proteid foods.

DR. MORRIS MANGES, New York, said that the average general practitioners do not make extensive use of the valuable means of diagnosis at their disposal. Again, when such attempts are made, often the method is at fault, and especially is this true when an attempt is made to pass the stomach tube. Very often failure results because of the nature of the tube; the majority of these tubes are soft, and really can not be used by any one, and are often provided with a bulbous funnel at the ends. Another point is the awkwardness of the manipulator, possibly from lack of practice. As a result of all this, the general practitioner believes that these various methods of diagnosis and analyses of stomach contents, are too complex, though they are even simpler than the methods employed for urinary analyses. One need not bother with percentages; one only requires average figures. We must know relatively the presence or absence of free hydrochloric acid, etc. Another point Dr. Menges believes to be of importance is that what little of the stomach contents is found on the end of the tube can be utilized for diagnosis; no matter how small, strips of testing paper can be used by applying them to the end of this tube, and a complete analysis can be made. The futility of making one analysis should be emphasized. If we are dealing with organic disease the variations presented can only be appreciated by those who have worked with these tests; the use of one test breakfast will not do. It is positively absurd, he said, to depend on the results of one examination. By gross examinations of specimens one can determine a great deal in the vast majority of clinical cases.

DR. S. P. BLACK, Pasadena, called attention to an important point brought out by Dr. Billings, i. e., the question of proper mastication. We all know that mastication is improperly performed by all of us; if more time were devoted to proper mastication there would be far less bolting of food. When exercise is taken a meat diet is needed. It is necessary that mastication should be so complete that the gastric and intestinal juices may gain ready access to all particles of the food. If mastication is properly and thoroughly done, the appetite can be satisfied with a less amount of food. More that is taken in can be utilized and less will be excreted. The amount of food taken depends on so many conditions that it is difficult to state exactly the amount necessary for each. This varies with the period of life and many other factors. For instance, an old man can not take the same amount of food that a younger man can. It should be borne in mind that the majority of cases of chronic rheumatism are due to a toxemia from the decomposition of proteids. The excess of proteid material appears not only in the form of urea and other products, but also as ptomains which when absorbed give rise to chronic joint affections. The relation, therefore, between proteid intake and mastication can readily be seen and its importance recognized. Dr. Black quoted Dr. Stengel as saying that there exists a feeling among the profession that the examination of the secre-

* THE JOURNAL A. M. A., April 1, 1905.

tion of the stomach is becoming of less and less importance and that an examination to determine the motor function of this organ is of prime importance. The papers read in this symposium place more reliance on the physiology of the stomach and a study of the stomach secretion. The laboratory is essential for a proper understanding of abnormal gastric diseases.

DR. JOSEPH L. MILLER, Chicago, asked what results Dr. Dock has had with Weber's test for blood in the stomach contents and what value he places on it. While it is true, Dr. Miller said, that in cases in which hydrochloric acid is present it is not absolutely necessary to test for pepsin, still in those cases in which there is an absence of hydrochloric acid it is necessary to determine whether pepsin is absent as well. He asked Dr. Dock if he resorts to this test. Dr. Miller believes this test should be in more general use. He believes that we should simplify exact qualitative determination more than we at present do. On the other hand, he also believes that a quantitative determination gives very valuable information. With Ewald's aspirator it is very easy to obtain all the contents of the stomach, and the use of this instrument simplifies the methods very much. When sarcinæ are associated with a marked increase in the hydrochloric acid, it is important as indicating a benign stenosis of the pylorus.

DR. J. M. ANDERS, Philadelphia, said that it is a well established fact that physiology has a direct bearing on practice of medicine and is a most valuable aid in recognizing and treating diseased conditions. The only defect in this symposium is that the physiology of digestion has not been included. The distribution of copies of papers such as presented by Dr. Billings would have a decided effect on medical progress in America. What Dr. Billings has given us is beyond dispute, and these things are most useful to the practicing physician. Dr. Anders was glad to hear him mention and emphasize the fact that the average amount of food ingested is at least twice as much as required to maintain complete physiologic efficiency. The minimum amount of alimentation necessary under the many varying conditions of life, including the ages of patients, is as yet imperfectly understood. The physician should be able, instead of as at present estimating empirically how much food is necessary, to determine this scientifically. The medical profession certainly owes much to the observations of Chittenden, Voit, Atwater and others. The determination of the amount of creatinin excreted daily is sufficient for the determination of the nitrogen balance of the body. Dr. Anders believes that up to the present time, and in the future as well, the most important advances will be those made as the result of analyses of food ingested and the urine, the feces, etc., excreted. In addition, it is necessary to take into consideration other factors, such as the influence of exercise, sleep and baths. These problems of nutrition seem somewhat complex, more than certain observers would have us believe. Dr. Musser has presented a long list of factors in which gastric symptoms are present, but Dr. Anders would be glad to hear more regarding acute symptoms that occur in chronic affections and which are apt to mislead us. Recently Dr. Anders saw a patient suffering from acute articular rheumatism, in whom the joint condition was held in abeyance with the distension of the stomach. It was thought that gastric trouble had developed, but the physical examination revealed the presence of a pericarditis. He has seen several similar instances with pain in the epigastrium. He was very glad to hear Dr. Dock emphasize the variability which resulted from an examination of the gastric contents. It should be borne in mind, however, that no organic affection of the stomach exists, but that it presents certain variabilities, although such changes are by no means pronounced in all instances.

DR. F. C. SHATTUCK, Boston, declared that there is too much theory regarding this matter. He believes that medical men are in danger of running after false gods. There are, he believes, but two conditions in connection with ulcer which call for surgery. The first is perforation; the other, obstinate cicatricial contraction of the pylorus.

DR. JAMES J. WALSH, New York, said that in stomach medication the nostrums have even a larger field than in any other disease. Judging from the number of varying remedies for stomach symptoms of all kinds that are fairly pushed on the doctor by the advertising agents and the large amount of printed matter with regard to them that comes to his table, there must be an immense amount of medicine for stomach symptoms prescribed in this country. All sorts of ferments have been introduced and all the vegetable kingdom has been rifled of precious treasures in order to provide new stomachics. The more distant the country and the more unusual the plant from which they come the more grandiloquent the advertising and the greater the promise of efficiency. Josh Billings once said that it is not so much the ignorance of mankind that makes them ridiculous as the knowing so many things that ain't so, and there is no doubt that with regard to our knowledge of the stomach this is truer than with regard to almost any other department of medicine. Each individual is absolutely a law unto himself as regards his tastes and his capacity for digesting various articles. The distinguished Russian physiologist, Pawlow, has demonstrated that in animals at least a special kind of gastric juice is secreted for each kind of food that the animal takes. If to this be added the individual tastes in human beings and the psychic influence on the stomach, then the problem of stomach digestion becomes the most complex we know. Fortunately physicians do not have to bother much about the variations in the chemism of the stomach. So long as the stomach will pass on the food that is furnished it digestion will go on and will maintain nutrition. In cases of gastric cancer, for which the whole organ is removed, it is a common experience that the patients gain as much as 30 or 40 pounds in weight within a few months after the operation, in spite of the complete removal of their stomachs. This, however, is only a confirmation of what was known otherwise as the result of stomach investigation. Not a few persons suffer from achylia gastrica, that is, a condition in which there is no secretion of gastric juice in the stomach and no process of digestion carried on there, yet suffer very little from digestive symptoms and do not lose in weight. In more recent times the practice of jejunostomy has demonstrated the same thing. When there is a cancer of the pylorus and the patient has lost seriously in weight, digestion proceeds very happily and nutrition begins at once to improve when an opening is made by which food is allowed to pass on immediately to the intestines. Gastric motility, then, is more important than gastric chemism. If physicians can only switch the food past the stomach, the digestive system will continue its work. As a matter of fact, most of the tonics that do good in digestive disturbances influence the motility of the stomach rather than its secretory activity. That is why strychnin is so useful. The most serious difficulty that hampers stomach motility is the lack of proper mastication. Meats must be chewed, but still more must vegetables be chewed. It is the vegetable-eating animals that ruminate. It is in this line and not in trying to help gastric chemism and the ferments that therapeutics are effective.

DR. JOHN A. LICHTY, Pittsburg, believes that gastric atony due to organic obstruction is the crucial point in this symposium and that it will assume the same position in the next few years in the deliberations of this section that appendicitis did some years ago. After a rather extensive experience in the treatment of these conditions, he has found that in many cases he might have easily dispensed with mechanical devices, such as intragastric electricity, massage and lavage. Simply advising the patient to masticate his food more thoroughly and to refrain from drinking at meals and for an hour or two after seemed to be all that is necessary in many cases. Food not properly masticated must be ground up in the pyloric end of the stomach, and such extra work is likely to produce atony, erosion, ulceration or other gastric disturbances. Dr. Lichty did not mean to say that we should not use these agents in selected cases, for they are often absolutely essential to bring about a cure. In the treatment of gastric atony due to organic obstruction, the internist and surgeon must come together and understand each other. The earlier this is done the better for the patient's welfare. With the present methods of diagnosis physicians are not yet able to make a definite diagnosis in the earlier stages of some of the most important gastric lesions. The effect of rational treatment and the

course of disease must be observed at times before a diagnosis can be made. Now and then it may be necessary to do an exploratory operation before a diagnosis can be made. Such an operation is not always a serious undertaking and may frequently reveal important conditions. Dr. Lichty recently saw a case in which he was positive that there was a gastric ulcer; the patient suddenly had an attack of jaundice and then he was positive that he had to deal with a case of obstruction of the gall ducts. There was found at operation a band of adhesion which interfered with the pyloric entrance and also with the gall duct. No amount of treatment would have relieved this patient, though she had received treatment from different physicians for a year or more for gastric ulcer and for gallstones. The tendency of the internist too often is to be satisfied to have patients in a chronic condition come to the office day after day until they are entirely dissatisfied and discouraged and ready to desert to the quack. There is still too wide a space between the internist and the surgeon, and in this space the quack and unscrupulous doctor find a rich harvest. The internist and surgeon must co-operate.

DR. C. M. COOPER, San Francisco, said that Dr. Billings' paper should have been read before a conjoined section, inasmuch as the subject matter is unwisely neglected and its importance to all branches is equally great. It is not necessary to tell the patient to limit the intake, as the muscular movements associated with thorough chewing plus the better digestion of the food chewed induce a feeling of satisfaction which in itself tends to diminish the amount eaten. Further, it must be remembered that a thorough clinical examination should come before a chemical analysis of the stomach contents. On the Pacific slope aneurism is so common—abdominal aneurism as well as thoracic—that such an inverted order of examination might lead to serious trouble. Moreover, frequent chemical examinations are just as important as frequent stomach-content analyses. If prior to the passing of the stomach tube the patient suck a strong English peppermint the throat is partially anesthetized and the proceeding is rendered less difficult in sensitive patients. Though, of course, periodic gastric crises may occur in locomotor ataxia and be due to that alone, sometimes there is a local trouble underlying or complicating the nerve storms, as in two cases which Dr. Cooper recently saw. In one there was stenosis of the pylorus; in the other, a band binding down the first part of the duodenum was demonstrated by operation. The great majority of physicians refer their gastric patients too late to the surgeons and terminal infections occur. Patients should be referred back to the physician; otherwise the primary constitutional tendencies which have led to secondary lesions necessitating surgical interference will often remain uncorrected.

DR. NORMAN BRIDGE, Los Angeles, Cal., said that one important point in the physiology of the stomach has been omitted in this discussion, and that if physicians could keep this point in mind it would simplify the subject very much. The stomach is not useful in absorption. The important thing regarding this organ is its motility, and the purpose of the stomach seemed to be to act as a reservoir to receive and to retain food for a variable period of time and to deliver it slowly to the intestine. The stomach could be left out of consideration for the business of digestion. If we could get the food out of the esophagus, through the pylorus, it then would be possible sufficiently to nourish patients. The absorption of water even does not take place to any extent from the stomach. It is a convenience to mankind to take food into the stomach at certain intervals and to go on about the business of life. If one takes too much food and absorbs too much, it is the intestines that do it and not the stomach at all. Dr. Bridge thinks that it can be shown that the stomach may directly cause such systemic diseases as Dr. McCaskey has referred to.

DR. FRANK BILLINGS, Chicago, stated that carbohydrates and fats furnish the animal body fuel. The proteid food furnishes the defect due to waste of the muscular system and other organs which perform the work for the body. The amount of carbohydrates and fats necessary for fuel for an adult will depend on the character of the work. A laboring man will require more than a man who leads a sedentary life. The amount of proteid necessary to repair the waste from muscular exertion, etc., has been found to be only about one-half that which has been advocated for years in the standard dietaries. With this one-half the amount of proteids a nitrogenous balance may be maintained. There are fanatics on all subjects, and in this particular one those who advocate a very low proteid intake and over-mastication, as compared with ordinary chewing of food, may do things which appear ridiculous. Nevertheless, the action of these men and what has been written on the extreme side of the question by them has brought the attention of the public to the subject and in this way has been of great benefit. The lay public and many of the medical profession believe that all strength, nutrition and force comes from the proteids and especially from the albumin of meat. The fact is that the proteid is simply a tissue builder, and growing individuals, therefore, may require a considerable amount of albumin, but when the growth is once attained only that amount of proteid will be necessary to maintain good health and strength which will furnish food to take the place of the waste produced by muscular and other bodily activities. The amount of proteid necessary for each individual may differ, but only that amount will be required which will maintain a nitrogenous balance, as evinced by the nitrogenous output in the urine, feces, etc. Dr. Billings mentioned an error which may occur from the use of bread in a test meal. Sponge bread so used, even after twenty-four or more hours old, will show yeast cells in the stomach contents and may, therefore, be misinterpreted as indicating stasis of the stomach contents.

DR. GEORGE DOCK, Ann Arbor, said that he considers visible masses of mucus in the stomach contents as abnormal, but one must be sure this mucus does not come from the respiratory tract or from the mouth or be the result of awkward manipulation of the tube. On the other hand, a small amount of mucus which is visible may be present, and yet one can not say from this alone that the patient has chronic gastritis. Though the physician can not draw the line anywhere, Dr. Dock would say that in general more than from 3 to 5 c.c. is abnormal. He agreed that resorcin is an excellent test, but he likes Günsburg's better. He also agreed that not too much time should be spent in working with the decinormal solutions, etc.; but, on the other hand, a physician should have had practice with these before doing more rapid work. The examination of the vomitus he believes to be very important, but he sounded a note of warning against the use of this method as a substitute for the tube; it is a dangerous one. A patient can vomit a large quantity and yet the stomach contain still more important material. Dr. Dock has been using tests for occult blood in the laboratory, and with satisfaction. He has also looked for occult blood in the stools after excluding any bleeding points in the rectal mucosa. Delicate reactions for blood in stomach contents are easy, but one may meet with many instances in which there is no distinct lesion of the mucous membrane. He agreed with Dr. Miller regarding the test for pepsin and also for rennin. They are useful, but one can very often get along without either of them. The presence of sarcinæ gives valuable information in many ways. Sarcinæ are rarely found in malignant disease of the stomach. If found in large quantities it is sufficient to say that the patient has not malignant stomach disease. On the other hand, yeast is often found in gastric cancer when hydrochloric acid is still present. He is not so enthusiastic with regard to the surgery of the stomach as Dr. Walsh. He agreed that cancer should be operated on if possible. In cases of ulcer, also, he has had patients operated on and with good results. But doing a gastroenterostomy in case of ulcer does not make the patient normal. In a large number of patients, 16 or 17, who have been reported as being operated on for gastric ulcer, peptic jejunal ulcers have developed which were even more dangerous than the original gastric ulcer. This ulcer tendency can not be cured by operation, and so it is with functional disease and stagnation of food; it has not been demonstrated in cases of gastroenterostomy or pyloroplasty that the stomach is as good as before. Therefore, he thinks, physicians should take the middle ground between what Dr. Walsh has given us and those who take the gloomy aspect or conservative aspect in regard to this subject.

DR. CHARLES G. STOCKTON, Buffalo, thinks that lack of success is often due to the way in which cold is employed. If too

cold, or if too much force is employed, depression is likely to follow. Sometimes benefit is to be obtained by alternating the cold with the hot douche. He also emphasized what Dr. Manges said regarding the importance of selecting a proper stomach tube. This is a point that is often overlooked. He also agreed with Dr. Lichty that in the treatment of stagnation, which depends on atony rather than on obstruction, much can be accomplished in attention to mastication and the withholding of liquids at meals. In any case of atony of the stomach reaching to stagnation, without obstruction, one should not forget what can be accomplished through the general management of the case and general measures. He advised physicians not to overlook general innervation. On the other hand, he said one often fails to obtain success because of overlooking local treatment. He disagreed with Dr. Bridge that the stomach is practically unnecessary. Physicians are too prone to say that certain organs are unnecessary to-day. He does not believe that one can get along without the stomach, even if anastomosis is practicable. In some cases of achylia gastrica the stomach will empty itself quickly, within ten minutes after a meal is taken, thus showing an enormous motor activity. This state may be compared to that of the patient without a stomach. Yet these cases of achylia gastrica have general and local symptoms and the victims are not well people.

## A CASE OF HEART GUMMATA, WITH SUDDEN DEATH.*

F. GOLDFRANK, M.D.
NEW YORK.

On Jan. 10, 1905, Professor Dittrich, head of the Department of Legal Medicine in the German University in Prague, performed an autopsy on a woman aged 25, who had died suddenly during the night of January 8. The report from the police department stated merely that the woman had "heart disease" for some time. The heart revealed such an interesting condition that Professor Dittrich at once sent it to the pathologic institute for further study.

### AUTOPSY REPORT.

The findings at the autopsy, according to the data kindly furnished by Professor Dittrich, were, briefly, as follows:

*General Appearance.*—The body was of medium height, stout but well built and well nourished. The brain was normal, somewhat anemic. The lungs were perfectly normal, no sign of tuberculosis being found; some of the bronchial lymph glands, however, showed the presence of calcified nodules. The liver and spleen were hyperemic, otherwise normal. The gastrointestinal tract, pancreas, adrenals, and the bones were normal.

*Kidneys.*—The right kidney likewise showed no pathologic changes. The left kidney, which was received with the heart, presented two deep cicatricial depressions. One of these embraced the posterior surface and outer border near the lower pole, and measured 4 cm. by 2 cm. On section, a mass of firm gray scar-like tissue was seen extending deep into the substance of the kidney. This mass appeared to consist of numerous distinct nodules of varying size, the largest 6 mm. in diameter. These tended to form a conglomerate and, on the other hand, were not very sharply separated from the kidney substance. Near the conglomerate, but separated from it by renal tissue, were several small nodules. The second depression was situated on the posterior surface of the kidney near the upper pole. It was much larger, measuring 6 cm. in each direction; but it did not extend deeply into the kidney, and showed no nodules.

*Pelvis.*—The urinary bladder was normal. The vagina and the somewhat enlarged uterus contained a small amount of white tenacious mucus. The uterine adnexa were firmly adherent to the surrounding tissues, and both tubes were dilated with a watery fluid to the size of a little finger. The ovaries contained a number of cysts, some of them filled with a bloody fluid.

*Heart.*—The pericardial cavity contained a small amount of clear serum. Over an area of 6 sq. cm. on the anterior surface of the lower third of the left ventricle the two pericardial layers were adherent. Otherwise, the pericardium was normal with the exception of a thickened and reddened area over the left auricular appendix. The heart was markedly enlarged, especially the left ventricle. The cause of this latter was discovered on opening the heart, for practically the entire wall of the left ventricle was infiltrated or substituted by a huge mass of firm grey white tissue similar to that seen in the kidney. This mass, projecting far into the lumen of the ventricle, presented an irregularly and coarsely nodular surface.

In the opposite direction it extended in some places as far as the pericardium, in others it was separated from the latter by the hypertrophied muscle, which averaged 14 mm. in thickness. Only one area of the left ventricle was free from this tumor mass, a space measuring irregularly 6 by 2.5 cm. embracing the lower part of the septum and the adjoining portion of the anterior surface. The entire ventricle was over 10 cm. in length and 7 cm. in lateral diameter. The thickest part of the wall along the left border measured 4 cm., of which 2.5 cm. was composed of tumor. The growth had completely infiltrated the papillary muscles as well as the lateral half of the auriculoventricular ring, where a nodule of 4 cm. in diameter projected into the left auricle. In the left auricular appendix were several smooth, grayish white patches. Furthermore, the tumor extended from the upper part of the ventricular septum into the lumen of the right ventricle. The latter had in addition several small nodules in the myocardium of its right border. The right auricle was not affected, and all four of the valves were normal in appearance. The foramen ovale was closed. In the heart cavities only fluid blood was found. The aorta was in general normal; only just above the aortic valve and in the arch were minute grayish yellow thickenings of the intima.

### HISTORY OF CASE.

These findings appeared to justify a tentative diagnosis of a gummatous affection of the heart and kidney. Consequently, investigations were promptly begun as to the history of the case, and for the success of these researches I am indebted not only to Professor Chiari, who gave me most valuable assistance and advice throughout, but also to the painstaking investigation of privatdocent Dr. Ferdinand Pecirka, *Polizeichefarzt* in Prague. Further information was kindly furnished by Prof. Filip Josef Pick of the German dermatologic clinic, and Professor Janovsky of the Bohemian dermatologic clinic.

The history of the case is as follows:

*Patient.*—K. Z. was born in 1880. Her father is still living at the age of 62. He was formerly a soldier, has always been healthy though not robust, and has had numerous children from two marriages. The mother was an illegitimate child, had five children, and died at the age of 36. Further details about her are not known. The patient had none of the important diseases of childhood. On March 26, 1896, she applied for a license as prostitute. As, however, she had not at that time had any venereal trouble and further had not practiced prostitution regularly, her application was refused. On May 5, she again applied with the statement that she had been treated for gonorrhea and a soft chancre. The license was then granted. Her statement was accurate, since she had actually been in Prof. Janovsky's clinic from April 4 till May 5. The diagnosis was *Ulcus molle commissurae. Blennorrhoea chronica urethrae et cervicis.* Gonococci were present. There were no general symptoms.

*Clinical History.*—On Oct. 9, 1896, she entered Professor Pick's clinic with the clinical diagnosis "*Lues condylomatosa.*" At that time she presented a general maculopapular skin eruption; squamous eruption on the palms; ulcerated mucous patches in the mouth, on the palate, and tonsils; syphilitic

* From Professor Chiari's Pathologic Institute in Prague.

leucoderma; erosions on the caruncule, on the posterior wall of the vagina, and on the vaginal portion of the cervix; and finally a urethritis. During her stay in the clinic she had an attack of catarrhal icterus. On November 25 she was discharged "free from symptoms." In March, 1897, she was again in Prof. Janovsky's clinic for three weeks, where she was treated with three injections of salicylate of mercury. The diagnosis read: *Lues condylomatosa. Leucoderma Neisser. Blennorrhœa cervicalis.* (Gonococci positive.) Finally, in September, 1897, she remained sixteen days in Prof. Janovsky's clinic, receiving two potassium iodid injections. At this time, in addition to a venereal ulcer, cervical gonorrhea, and leucoderma, she had a general glandular enlargement. There were no local symptoms of syphilis.

*Subsequent History.*—In 1899, she applied for a revocation of her license on the ground that she was entering domestic service. She continued her former profession however, in combination with that of waitress. In September, 1903, she married a student who readily admitted that his wife had had an "intimate friendship" with numerous other students. Soon after their marriage, she was examined by the physician of a life insurance company and rejected on the ground that she had a heart lesion. Neither before that time nor afterward, however, had she had the slightest symptoms of a disease of the heart, being always in the best of health. She was likewise rejected by a second insurance company for the same reason. Of the presence of heart symptoms immediately preceding the sudden death no information could be obtained.

The foregoing facts establish beyond question that the woman had become infected with syphilis eight and a half years before her death, and almost as certainly that she had some heart lesion for one year. Further, that the latter caused no symptoms sufficiently marked to be noted by her or by those immediately about her.

## VERIFICATION OF DIAGNOSIS.

Parallel with the investigations into the antecedents of the patient. the microscopic examination of the heart and kidney was undertaken in order to verify the gross diagnosis. From the heart, pieces were taken from the wall of the left ventricle, the papillary muscles. the septum, and the left auricle. Both areas in the kidney were also examined. The pieces were fixed in Orth's fluid, and stained with hematoxylin-eosin, Van Gieson's solution, Weigert's resorcin-fuchsin, for tubercle bacilli, and for fibrin. I may say here that a careful search for tubercle bacilli was negative throughout. The gross specimens were preserved in alcohol for the pathologic museum of the institute.

*Microscopic Examination.*—As typical of the various places examined, a section extending through the wall of the left ventricle from the pericardium to the trabeculæ and endocardium may be considered. At this place the heart wall was 3.5 cm. thick, and of this about 1 cm. nearest the pericardium showed the regular arrangement of heart muscle. The rest of the section contained only one muscular bundle of considerable size. With this exception, there were no traces of muscular fibers till the outer half was reached, where a few fibers appeared here and there, and then rapidly increased in number as the muscular zone was approached. In other words, there was no sharp line of demarcation between myocardium and tumor; the latter extended in an infiltrating manner between the muscle fibers. Of the tumor, a portion consisted of a poorly stained, partly homogeneous, partly reticulated ground substance, which was either free from cellular elements or contained scattered fragments of nuclei. These necrotic areas were not sharply circumscribed, but passed over gradually into places where the reticular substance was interspersed with numerous cells, and then into other parts where the latter predominated to the almost complete exclusion of intercellular substance. In the less cellular places there were occasional collections of cells which appeared fairly circumscribed with the lower power, although they were irregular, not rounded in outline.

The character of the cells was varied. The greater number were small, with a round, deeply staining nucleus and very little protoplasm, corresponding to the small lymphocytes of the blood. Most of the remaining cells were small spindle cells of the type found in young connective tissue. Also where these predominated there was a certain amount of intercellular connective tissue consisting of fine fibers and a somewhat coarser network, which, however, was nowhere very dense. Cells with a small round eccentric nucleus and a fairly large amount of slightly eosinophile protoplasm (plasma cells) were numerous in almost every field. "Epithelioid" cells were much less widely distributed; polymorphonuclear leucocytes were virtually absent.

A study of the arrangement of the cells revealed nothing that was at all constant. Certainly there was no distinct zone of epithelioid cells around the central necrotic areas; here and there a few such cells were grouped together near the latter. In general, the lymphocytes, plasma cells, and fibroblasts were interspersed without special arrangement. Only in the circumscribed cellular foci referred to above was there a definite structure. Here there were usually a number of fibroblasts in the center or immediately about a small necrotic center, and around these a dense zone of lymphocytes, which then gradually lessened in number toward the periphery. These areas, however, contained another type of cell, and that in no infrequent number. In the very center there was often a large giant cell of the Langhans type, and near this usually several smaller ones. In one field (Zeiss, oc. 2, obj. C.) there could be noted as many as seven unquestionable giant cells. It was only in these patches, however, that they were found.

The heart muscle cells, even at the very boundary of the tumor where individual cells were frequently isolated, showed a protoplasm of normal staining power and perfectly distinct striations. The nuclei also stained well and presented few signs of degeneration. At the boundary zone, however, there was a much larger amount of connective tissue than elsewhere, which surrounded the muscle bundles or even individual cells, and was much coarser than in the tumor proper. Between the muscle fibers there was a considerable infiltration with lymphocytes and fibroblasts.

The section was not very vascular, and yet there were many more capillaries than are usually seen in tubercles of that size. Especially noteworthy was the fact that well preserved capillaries were frequently found in the very center of the larger neurotic areas. The larger arteries of the myocardium and pericardium had somewhat thickened walls, but little endarteritis. The smaller arteries, especially near the tumor, were more markedly changed; the media was hyperplased to double or three times the normal thickness, and presented marked signs of degeneration; the lumen was frequently almost obliterated by the arterial thickening, though there was no thrombosis.

The picture presented by other sections did not differ materially from the one described. In some places the giant cells were much more numerous and more widely distributed, however, so that they appeared in numbers in nearly every field; also the vascular changes were in general more pronounced. There were more dilated capillaries in the tumor parts, and even the large arteries presented the highest grade of mesarterial thickening, and marked endarteritis as well. The "grayish-white patches" in the left auricular appendix were merely a fibrous thickening of the endocardium; but the pericardium in the same part of the heart showed lesions similar to those in the heart muscle, consisting of a general infiltration and localized nodules of lymphocytes, connective tissue cells, and Langhans' giant cells.

The condition in the kidney was quite analogous to that in the heart. The sections taken through the deeper of the two depressed areas showed numerous isolated foci of cellular infiltration, and one large mass which contained scattered areas of necrosis alternating with collections of cells and with frequent remains of kidney substance—individual cells and fragments of cells, bits of tubules, glomeruli, and larger masses of renal tissue. The cells were almost entirely small lymphocytes. There were practically no epithelioid cells and very

few plasma cells. Giant cells on the other hand were remarkably numerous, being scattered over the field almost as they would be in a giant cell sarcoma. The majority of them were clearly of the Langhans' type; but some were irregular in form with an irregular arrangement of the nuclei, and these assumed especially large proportions. Connective tissue cells appeared in comparatively small numbers, and interstitial fibers were present only in the most delicate of strands, which, however, were almost uniformly distributed.

The kidney substance had suffered a marked parenchymatous degeneration in which all parts of the kidney were affected. But the process had advanced further than that. Not only were the convoluted tubules swollen and degenerated, but between them was a large amount of young connective tissue. Similarly, the glomeruli were often overspread with a perfect network of fine connective tissue fibers. All parts of the kidney were exceedingly vascular, including even the necrotic areas. The arterial changes were still more advanced than in the heart. All three of the arterial coats were affected, and the lumen was contracted even to complete obliteration.

The more superficial area near the upper pole of the kidney presented mainly arteriosclerotic changes—substitution of the glomeruli by connective tissue—dense connective tissue bands between the tubules, and marked lymphocytic infiltration. The arteries here were thrombosed in addition to the arteriosclerotic changes, and the capillaries presented the same congestion as elsewhere.

The microscopic changes just described could be caused by only two diseases, tuberculosis or syphilis. To accept the former etiology it would be necessary to assume that the lesions were extremely atypical, whereas the picture corresponds excellently with typical gummata as they have been described elsewhere in the body. The irregular nodular appearance of the lesions macroscopically, the general distribution of epithelioid cells and fibroblasts, the large number of the latter, the presence of capillaries even in necrotic parts, the absence of tubercle bacilli, all speak for gummata. A large number of Langhans' giant cells has been considered a point against syphilis. Baumgarten[1] goes especially far in that direction, but in the very article in which he almost denies the possibility of lesions with Langhans' giant cells being pure gummata he gives the various other differential points between tuberculosis and syphilis, and for all of them the present case might easily represent the type of syphilis.

In this connection it is interesting to note that Van Huellen[2] has recently published a case of sudden death due to heart gumma, in which he lays great stress on the presence in the lesions of enormous numbers of giant cells, some of them of the Langhans type; and Stockmann,[3] after reviewing the entire literature of heart gummata in adults, declares that the presence of giant cells in unquestionable gummata is by no means rare. The heart lesions may be accepted from internal evidence alone as syphilitic; that evidence is strengthened by the absence of any sign of recent tuberculosis elsewhere in the body, and by the unquestionable history of syphilis obtained.

The case, considered as a whole, is perfectly clear. The history gave conclusive evidence of an acquired syphilis and of heart lesion of at least one year's duration. The examination of the heart showed no disease other than syphilis and that in a recent not obsolete form of gummata, which had invaded three of the four heart cavities, reaching their greatest dimensions in the left ventricle, where they formed one huge conglomerate. There is no doubt that this disease of the heart was the cause of the sudden death. Interesting, apart from the wide extent of the gummata, are the large number of Langhans' giant cells and the lesions of the kidney.

### COMPARISON WITH OTHER SPECIMENS OF HEART SYPHILIS.

Professor Chiari kindly placed at my disposal three specimens of heart syphilis from the pathologic museum, and of these two appear worthy of a short description. Unfortunately, the catalogue of the museum failed to give the data necessary for a complete report of the autopsies, to say nothing of the clinical aspects of the cases.

The first case (museum No. 811) was a heart markedly enlarged, even for a very heavy person; and this enlargement was due to hypertrophy and dilatation of both left and right ventricles. In the former the dilatation predominated, the wall not exceeding 2 cm. in thickness, whereas the cavity was dilated to approximately 80 cu. cm.

The right ventricle, on the other hand, had less dilatation but the wall was fully as thick as that of the left side. Unlike the latter, this increase in size was not due to muscular hypertrophy but to the growth of exceedingly numerous small nodules, which had infiltrated every part of the myocardium, including the septum. These did not project into the ventricle like huge knobs, as in the case previously described, but merely gave the endocardium an uneven appearance, like that of a hobnailed liver in advanced cirrhosis. The pulmonary and tricuspid valves, as also the right auricle, were normal. The left ventricle was free from the new growth in the greater part of its extent, only just below the attachment of the aortic valve there was one small nodule. The valve itself was slightly thickened, but the intima of the small piece of aorta attached looked perfectly smooth. The right auricle, including the auriculoventricular ring, was the seat of large masses of tissue, which here did not form distinct nodules, but had infiltrated the muscle in a more uniform manner.

Various parts of the heart were examined microscopically by the same methods as mentioned above.[4] The museum diagnosis of "syphilis cordis" was amply corroborated. Large areas of the tumor masses consisted of old connective tissue, but scattered here and there were numerous foci of cellular infiltration.

Of recent necrosis there was little to be seen, though there were places where the connective tissue seemed to be organizing at the site of former necrosis. There was also a small amount of calcification. The cellular foci were irregular in outline, and presented no definite arrangement of the cells, which were almost all small lymphocytes. There were no epithelioid or giant cells. These foci were usually grouped around a small artery. In addition to the circumscribed, there were many diffuse infiltrations of lymphocytes among the connective tissue and muscle fibers. Unlike the former case, there were bits of muscle tissue scattered throughout the new growth. The blood vessels presented advanced changes, both hyperplastic and degenerative, in which all three coats took part.

1. Baumgarten, P.: "Ueber die histologische Differentialdiagnose zwischen tuberlöser u. gummöser Orchitis." Wiener med. Wochft. 1900, No. 47.

2. Van Huellen, A.: Ein Fall von Myocarditis gummosa mit zahlreichen Riesenzellen. Zeits. f. Heilkunde, 1905, No. 4.

3. Stockmann, W.: "Ueber Gummiknoten im Herzfleische bei Erwachsenen." Wiesbaden, 1904.

4. All three of the museum specimens were preserved in alcohol; and although two of them had been in that fluid over thirty-five years, they yet possessed staining powers almost as good as those of fresh objects; such differential stains as the Van Gieson or Weigert's elastic stain giving perfect results.

The second heart (museum No. 2,817, a case from the Invalidenspital in Prague) was still larger, measuring 15 by 12 by 10 cm. The greater part of the heart was taken up by the enormously dilated and somewhat hypertrophied left ventricle. The right ventricle was only moderately enlarged; the auricles were of normal size, and presented no abnormalities other than an open foramen ovale. In the upper half of the left ventricle the myocardium was infiltrated by a more or less uniformly distributed, firm, smooth, new growth. The surface of the endocardium was even, not nodular as in the other cases. The greater part of the right ventricle was of a similar appearance. Furthermore, the upper part of the septum ventriculorum presented a deep, circumscribed depression in the right ventricle—an *aneurysma partiale chronicum*. The ascending aorta was the seat of advanced chronic aortitis of the type of syphilitic aortitis.

Microscopically, the tumor masses consisted entirely of dense, round-celled infiltration, interspersed with a considerable amount of connective tissue, mainly in fine fibers with comparatively few cells. There was almost no necrosis present. In addition to the general infiltration, there were very many circumscribed areas of still denser lymphocytes without any connective tissue. These foci occasionally contained one or more Langhans giant cells and a few epithelioid cells, but the latter never had any special arrangement. The foci were usually grouped near one of the very numerous small arteries. The giant cells also occurred in the areas of general infiltration. The heart muscle was somewhat degenerated, and the arteries all presented an advanced panarteritis.

In both of these cases the search for tubercle bacilli proved fruitless. The third case of syphilis of the heart which was examined (museum No. 3,289) contained no circumscribed gummata, merely a fibrous myocarditis, so that any further description of it may be omitted.

Syphilis of the heart with gumma formation is not exceedingly rare. Stockmann,[3] working in Professor Benda's pathologic laboratory in Berlin, was able in 1904 to collect 84 reported cases of circumscribed gummata, of which, however, he rejected several entirely and accepted as surely gummata 56. Since then at least 5 more cases have been published (Würth,[5] Handford,[6] Romanow,[7] Takeya,[8] Van Huellen.[2])

It may not be out of place to summarize briefly some of Stockmann's facts and conclusions. He found that in the majority of cases several or numerous gummata were present, only rarely a single gumma and that generally a conglomerate. All parts of the heart have been affected; the left ventricle by far the oftenest, the auricles seldom. The blood vessels regularly are diseased. From the clinical point of view he had to draw his conclusions cautiously because the clinical picture was seldom complete. Thus, only in 15 cases was the time of infection given, and this occurred from 3 to 30 years before death, and averaged 11 years. As corollary to that, the most deaths occurred between the ages of 30 and 40. The important question of how soon after infection the gummata appear, was, of course, exceedingly difficult to decide, since very few authors stated when the first symptoms appeared. This was doubtless due a great deal to the fact "that the patients felt perfectly well up to the time of their sudden death." A characteristic clinical course can not be set up. The commonest symptoms are tachycardia, arrhythmia and dyspnea. Other symptoms that appear frequently are pain over the heart region, a feeling of anxiety as in angina, palpitation, asthma, headache, vertigo and fainting spells. The physical examination usually reveals an enlarged heart, accentuated second pulmonic sound, the signs of a valvular lesion, and a small, irregular, rapid pulse, or sometimes a slow pulse.

Of the 49 cases in which the cause of death was reported, 15 died suddenly without any previous symptoms, and in 10 more the death was unexpected, although the patients had had signs of heart trouble. In 15 cases, the disease progressed slowly, and in 9 the death was attributable to another cause. Of 16 cases in which the left ventricle and septum were affected, 12 patients died suddenly; in 3 when the right ventricle alone was the seat of the disease, death came slowly.

The inability to obtain any history in so many of the published cases seemed to justify reporting the present one, aside from its interest as a widespread disease of the heart without clinical manifestations.

5. Würth, F.: "Ueber Infectiöse Granulome des Herzens," etc. Inaugural Dissertation. Würzburg, 1904.
6. Handford, H.: "Remarks on a Case of Gummata of the Heart." British Med. Jour., 1904.
7. Romanow, Th.: "Heart Syphilis." Russ. Vratsch, No. 45. Ref. in Deut. med. Wochft, 1904, p. 1898.
8. Takeya, H.: "Demonstration of Two Cases of Heart Syphilis Before the Medical Association of Tokio," Jan. 20, 1904. Ref. in Deutsche med. Wochft., 1904, p. 1599.

## GONORRHEA IN THE FEMALE.

### ITS DIAGNOSIS, FREQUENCY AND INFLUENCE IN THE PRODUCTION OF STERILITY AND OF GRAVE LESIONS OF THE PELVIC ORGANS.*

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It is my purpose to consider the question of gonorrhea in the adult woman and as it affects her reproductive organs only. My attention was especially directed to the subject in reading the series of papers read before the Section of Hygiene and Sanitary Science at the last session of this Association and by reading other contributions to the literature of the subject, notably the book by Morrow on "Social Diseases and Marriage," and the report of the committee of this Association, on "Prophylaxis of Venereal Diseases."

In these writings, the authors speak with such assurance regarding the frequency of gonorrhea and its disastrous effects, that one inexperienced in the matter would be led to the conclusion that the diagnosis of the disease is easily accomplished and that the disastrous effects are inevitable. This is in a measure true regarding the diagnosis in acute cases in which an opportunity is given for adequate examination. It is quite different in the chronic and subacute cases. After the disease has been in progress a considerable time the gonococcus of Neisser has disappeared or has become sequestered so that frequently any examination known at the present time will be inadequate to detect its presence, and without the finding of the gonococcus in the secretions or tissues of the patient, the diagnosis of the disease must be uncertain. For practical purposes, it is sufficient as a rule to accept the statement of the husband or lover that he was affected by gonorrhea at the time of cohabitation, if such act is followed by inflammatory lesions of the urethra, vulva, vagina or cervix uteri and in a woman heretofore healthy.

The history of the case, too, will afford some corrob-

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

oratory evidence in cases, for instance, of young married women, previously healthy, who immediately after marriage develop a purulent urethritis, vulvitis or vaginitis.

The difficulties then in making a diagnosis in the chronic and subacute cases are the infrequency in which we are able to demonstrate the presence of the gonococcus, the inability to obtain a satisfacory history of the cases and the fact that gonorrheal inflammation presents no pathognomonic signs, symptoms or course. The specific and nonspecific inflammatory lesions of these organs present exactly similar clinical pictures. Knowing these facts I was startled by some of the statements contained in the articles above referred to, especially the following, which I quote from the "Report of the Committee on Prophylaxis of Venereal Diseases," viz: "In women through most serious involvement of the pelvic genital organs and their adnexa destroying fecundity and giving rise to mutilating operations, 80 per cent. of all deaths from diseases of women are due to gonorrhea. Fifty per cent. of all involuntarily childless marriages are caused by gonorrhea of the female organs of generation, of which 45 per cent. are due to marital infection by men."

These statements were greatly at variance with my opinions formed by many years' practice as a family physician, and later as a gynecologist to a large charity hospital and two free dispensaries and in private practice as a gynecologist. I felt that I was greatly in error in my conclusions or else that the authors of this report had made statements concerning a subject of which they had not full knowledge.

It was for the purpose of setting myself right that I began the study which has resulted in the writing of this paper, and now after a considerable time spent in hard labor, I find myself in the position of every man who has undertaken the study of the subject of gonorrhea in the female, viz., that I have accomplished but little because of the difficulties in the way of positive diagnosis in many cases, and because of the lack of collective investigation.

Morrow in writing on one phase of this subject very truly says: "No one knows better than the writer of this paper, that the proportion of sterile marriages due to gonorrhea is an unknown and unknowable quantity, that it is impossible to present figures that aim at even approximate accuracy."

During the year beginning, June 1, 1904, and ending May 31, 1905, I examined in my office 358 new cases of women seen by me for the first time, and having disease of the genital organs. In each case, a careful record was made of the history, present condition and findings. In this number I found but three cases of acute gonorrhea. Of these, two were married women, and one was an unmarried woman. My assistant made numerous examinations of cover-glass smears of secretions taken from the vagina and cervix and from the urethra, also in all cases of discharge, and in not a single instance except those mentioned above were they able to find the gonococcus of Neisser. The Gram method of staining was employed. The culture method was not used. There were several cases in which I strongly suspected gonorrhea and took every precaution to prevent a spread of the disease to other patients. Who can tell how many cases of gonorrhea there were in the number? I confess I can not. Possibly, too, it as as Veit says, "The vast majority of first cases of gonorrheal infection in the female disappears spontaneously, leaving behind but few traces of the disease."

Certain it is that it is will nigh impossible to obtain the bacteriologic proof of the presence of gonorrhea in the female and no other evidence is accepted as conclusive. Even in some of the severe cases, the patients recover completely so far as the physical examination can determine. The following case is cited as an illustration of this fact:

*Patient.*—Mrs. A. consulted me Oct. 3, 1902, for the purpose of ascertaining why she did not become pregnant. She was a fine looking, well-nourished woman, 34 years of age. She had enjoyed almost perfect health for several years. Her only suffering was at the menstrual period, which recurred regularly every thirty-four days. The flow was moderate, lasting four days, and was very painful at the commencement.

*Examination.*—A physical examination failed to show any evident signs of disease of the reproductive organs. There was no endometritis and no displacement of the organs. They were of normal size and not unduly sensitive to pressure; in short, the uterus and adnexa, so far as I could determine, were perfectly healthy. She stated that her health was all she could desire, and that she came to me only because she thought I might be able to advise her in such a way that she might bear a child.

*Remarks.*—Nine years previous to this examination and soon after her marriage, I treated her for gonorrhea contracted from her husband. Her case was a severe one, and I thought was attended by the development of a pus tube. After a few months' treatment the inflammation of the bladder, uterus and adnexa disappeared, so that at the end of a year all traces of the infective lesion had disappeared. Now she is sterile and wants children. I informed her I was unable to give a reason for her sterility. Her husband may have been in fault or there may have been in her case a closure of the lumen of the Fallopian tubes. Which it was I am unable to say.

How many cases similar to this one there are in the practice of each one of us no one can tell. The early history of this case, however, if drawn from her might have enabled her physician to suspect that she had been the victim of gonorrhea. In order that light may be thrown on this subject, the recorded history of each case should give a more or less detailed account of a very serious illness since puberty and an especial account of any illness the patient may have had during the first few months of married life, the point especially noted being any deviation from normal in respect to urethral or bladder inflammation, vulvitis, vaginitis, leucorrheal discharges, and illness ascribed to disease of the adnexa.

I have made a careful study of my records of office patients to ascertain, if possible, what light, if any, they might furnish relative to the influence of gonorrhea on primary sterility. These records show that of 548 consecutive cases of women who had been married five years or more, there were 59, or 10 per cent., who had never been pregnant.

Of this number there were 12, or 21 per cent., who according to their own statements, used active means to prevent pregnancy. There were 6, or 10 per cent., of cases of gonorrhea discovered either by means of bacteriologic examination or on admission of the husband. Of lesions inducing sterility there were 6 cases of pronounced anteflexion of the uterus; 11 of fibroid tumor of the uterus; 5 of undeveloped uterus; 4 of retroversion and retroflexion, thus making 27, or 45 per cent., of diseases producing sterility that could not in any way be attributed to gonorrhea. Adding to the 45 per cent., 21 per cent. in which active preventive means were employed to prevent conception, and we find 66 per cent. of cases of primary sterility, according to my figures, due to diseases and conditions other than gonorrhea; but 10 per cent. could positively be ascribed to

gonorrhea. The lesions found in the remaining cases were as follows: Three cases of ovarian cysts; two of cancer of the breast; two of tuberculous peritonitis; one of prolapsus of the uterus and adnexa; three of carcinoma of the cervix uteri; one of endometritis alone; one of chronic ovaritis, and two in which no lesion was discovered. It is true that in but few of these cases was a bacteriologic examination made to determine the presence or absence of the gonococcus, nor indeed, was it needed, for no one would think of attributing sterility in a case of marked anteflexion to gonorrhea, or in one of fibroid tumor of the uterus to gonorrhea, or in one of an undeveloped uterus to that infectious disease.

Again my records show that in 321 consecutive cases of women who had been married 5 years or more there were 61, or 19 per cent., who had been pregnant but once. To determine the cause of sterility is a difficult task. My belief is that it is most frequently due to a successful effort on the part of the woman, with the sanction of the husband, to prevent impregnation. This is a harsh statement and possibly should not be made without submitting as proof the facts on which it is founded. This I can not do, but I will say that I have listened so often to the statement: "I do not want any more children and will not have them," in answer to my question, does the patient know of any reason she has not borne children since the last one, now 5 or 10 years of age, that I have ceased to put such a question, except in rare instances, and have taken it for granted that the patient has employed means she deems harmless to prevent pregnancy. What must we think of the slogan of Dr. Anna Shaw, "No ballot, no babies." Our excellent President Roosevelt seems to think he knows perfectly well that race suicide is most largely due to the voluntary efforts of the possible patients to avoid large families.

The second great cause of primary sterility as I see it, is found in the errors of development of the reproductive organs of women.

Tait[1] in speaking on infantile uterus and after relating the history of an extreme case, says, "Such an example as this is not common, while on the other hand a slight degree of the want of development of the uterus sufficient to give rise to troublesome menstruation and to be a bar to pregnancy is quite a common condition, so common that I almost think I might say it constitutes almost one-half my private practice in chambers, and a large proportion of my out patient hospital practice consists of cases of such arrest of development. I have a strong and growing belief that the exanthematous lesions of childhood are largely to be charged with this as a result."

In my list it will be noted that of the 59 cases of primary sterility there appeared 16 cases, or 27 per cent. of errors of development of the uterus, viz., 6 cases of anteflexion of the uterus; 5 of infantile uterus, and 4 of retroversion and retroflexion. Cases of marked anteflexion and retroflexion of the uterus in the young must be classed as errors of development. The exact influence of gonorrhea in producing sterility, while it is no doubt great, has not yet been determined.

How great an etiologic factor is gonorrheal infection in the grave pelvic lesions of women?

The result of my study disproves the statements quoted from the report of the association committee at the beginning of this paper, viz., that 80 per cent. of all deaths from pelvic diseases of women are due to gonorrhea. It shows at least that in my private practice and in the only charity hospital in Indianapolis, no such preponderance of grave pelvic lesions are due to gonorrheal infection. Before giving a résumé of my findings it is but proper to state that one of the difficulties entering into a solution of the question under discussion is the marked difference that prevails in different communities and countries relative to the prevalence of any disease. This well-known fact needs no discussion. I think all will concede it. Only collective investigation can bring satisfactory and final conclusions. I present my facts for what they may be found to be worth, not claiming for them conclusiveness.

During the year of 1904, I invaded the peritoneal cavity by operative procedure 167 times. In the patients operated on, 111 operations were done for the relief of diseases of the pelvic organs. These operations are classified as follows: Supravaginal hysterectomy, for fibroid tumors of the uterus and cancer of the uterus, 23 cases; vaginal hysterectomy for cancer of the uterus, procidentia and senile endometritis, 15 cases; salpingo-oöphorectomy for inflammatory lesions (mostly suppurative) of the tubes and ovaries, 30 cases; ventrosuspension, 6 cases; ovariotomy for ovarian cysts, 32 cases; vaginal section for broad ligament phlegmon, 1 case; shortening the round ligaments, Goldspohn's method, 1 case; sarcoma of the uterus, 1 case; herniotomy, 1 case; tubercular peritonitis with involvement of the Fallopian tubes, 3 cases; intra-abdominal shortening round ligaments, 6 cases. Only 30 cases, or 27 per cent., could possibly be attributed to gonorrhea. I attributed but 15, or 13.5 per cent., to gonorrheal infection, for all my experience is in accord with Ashton's,[2] who says, in speaking of salpingitis: "The vast majority of cases that are septic are puerperal in origin and they even exceed in number those due to gonorrhea."

Gonorrheal salpingitis is a serious lesion frequently leading to sterility and chronic invalidism, but not so frequently producing death of the patient as the infections following abortions or confinement. In my 30 cases of salpingo-oöphorectomy a bacteriologic examination was made in suspected cases, viz., in those in which the infection could not clearly be attributed to other causes or in those cases giving a clear history of exposure to gonorrhea; in but 3 of the cases was it possible to demonstrate the presence of the gonococcus. The inability frequently to find the diplococcus in chronic cases of suspected gonorrhea is so common that one soon tires of the hunt. Recently my assistant, Dr. Thurston, examined the secretions from 13 new patients, i. e., patients at first examination in whom there were cervical erosions and endometritis and in 2 of them purulent discharges from the urethra, yet he failed to find the gonococcus in a single instance; and still the histories were such in 3 of the cases as to lead me strongly to suspect the disease. It would be manifestly unjust to classify these as specific cases. There are no pathognomonic signs or symptoms of the disease. Every lesion of the female genitalia found in gonorrhea is also found in the same intensity and running a similar course in perfectly non-specific causes. If, then, we fail to demonstrate the gonococcus of Neisser in the secretions or tissues of the patient and make a diagnosis of gonorrhea we must do it on suspicion, a most unscientific method.

Clark[3] has cogently stated the present status of our knowledge of the inflammatory lesions of the Fallopian

1. "Diseases of Women and Abdominal Surgery," p. 154.

2. "Practice of Gynecology," p. 489.

3. Reed: "Text-Book of Gynecology," p. 488.

tubes, and what he says of this applies with equal force to all other inflammatory lesions of the female pelvic organs. He says: "Without question, the classification of diseases according to their etiology would be preferable on account of their greater scientific accuracy, but so far neither a careful bacteriologic examination nor microscopic sections are sufficient to reveal the primary infecting or exciting agent in a majority of cases."

As an aid in determining the frequency of gonorrhea in the female in our city, Dr. Paul Martin, superintendent of the Indianapolis City Hospital, at my request, made a brief tabulated report of all cases of women admitted to the hospital during the year of 1904. This hospital is a charity hospital and is the only one in the city into which venereal cases are admitted for treatment.

Dr. Martin tells me that all suspected cases of gonorrhea in both male and female are examined bacteriologically unless the history of the case of infection is clear or confession of the patient is made. The system of records introduced by Dr. Martin and kept on file is very elaborate and for the most part satisfactory, and from these records he compiled the report I have alluded to. The points brought out were the hospital number of the patient, the fact of the existence of acute or chronic gonorrhea, the manner of diagnosis, the results of bacteriologic examinations, and the lesion present.

There were treated in that institution during the year of 1904, 651 female patients.

There were diagnosed, either by bacteriologic examination or by confession of the patient: Acute gonorrheal cases, positive, 25; acute gonorrheal cases, doubtful, 4; chronic gonorrheal cases, positive, 49; chronic gonorrheal cases, doubtful, 9.

Of this number there were those who confessed to having or to having had gonorrhea, positive, 50 cases; doubtful, 3 cases.

Bacteriologic examinations were made with positive results in 29 cases; with negative results in 16 cases; with doubtful results in 3 cases.

It will be seen by this report that there were in all 74 cases in which a positive diagnosis of gonorrhea was made; in other words, 11 per cent. of the women admitted to the hospital at the time of admission had, or had previously had gonorrhea. This is the only hospital in our city, of 200,000 inhabitants, that admits gonorrheal patients, and admission of patients with venereal diseases is denied to none. It will be remembered that there were 49 patients classified as chronic cases, in the majority of which the diagnosis was made by confession and in which at the time there were no positive evidences of the disease. The diagnosis in these cases was based on the confession of the patients, every one of whom was asked on admission if she had ever had gonorrhea and her statement recorded. Of 49 cases recorded as chronic gonorrhea, 37 patients came to be treated for other disease, and of this 37, 4 were pregnant. Some further details of the report are of interest.

There were brought into the hospital either during or immediately after abortion 21 patients, of whom 18 were free from gonorrhea and 3 confessed to having had that disease.

The records show that 24 patients were treated for salpingitis, of which 12 were gonorrheal infections and 12 non-gonorrheal; there were 3 cases of ovaritis, 1 gonorrheal and 2 non-gonorrheal; there were 5 cases of pelvic abscess, 1 gonorrheal and 4 non-gonorrheal; there was 1 case of pelvic septicemia, non-gonorrheal; 3 cases of pelvic peritonitis, 1 gonorrheal, 2 non-gonorrheal, and 3 cases of vulvar abscess, 1 gonorrheal, 2 non-gonorrheal. There were, therefore, 16 gonorrheal and 24 non-gonorrheal cases.

To make the list of serious lesions complete, we should include 21 cases of abortion, 18 non-gonorrheal, 3 gonorrheal; 12 cases of fibroid tumors of the uterus, 5 of carcinoma of the reproductive organs and 1 of ovarian cyst. Thus making 79 cases of serious pelvic lesions, of which 19 patients had at the time or had had at some previous time gonorrhea, or 24 per cent. of the patients with grave lesions had gonorrhea.

There were at the hospital during the year 6 deaths from pelvic lesions, distributed as follows: Carcinoma of the uterus (only operative cases were admitted), 3; pyosalpinx, non-gonorrheal, 1; double oöphoritis, non-gonorrheal, 1; puerperal septicemia, 1; total 6.

### REPORT OF BOBB'S FREE DISPENSARY.

It should be stated regarding this dispensary that it is a dispensary under the direction of the Medical College of Indiana and each department is presided over by a professor in that department. This dispensary is maintained for teaching purposes and is abundantly supplied with experts and appliances. It maintains a chemical and microscopic clinical laboratory to which are sent by the clinicians specimens of urine, morbid secretions and tissues for examination.

The gynecologic department is presided over by Professors O. G. Pfaff and Chas. E. Ferguson, both of whom are accomplished gynecologists. They report that, while no prostitutes are denied treatment in their clinics, yet few of this class apply, and that they think 10 per cent. is a conservative estimate of the number of prostitutes seen in their departments. Every patient suspected of having gonorrhea, especially if there is a purulent discharge from the uterus, Skene's or Bartholin's glands, is carefully scrutinized and specimens of the genital secretions sent to the laboratory for bacteriologic examination. A fairly good record of all the work done in the dispensary is kept. The card system being used for this purpose.

At my request, Dr. Helen Knabe, a paid assistant in the laboratory, made a careful study of the records and compiled from them the report herewith submitted:

BOBB'S FREE DISPENSARY, JUNE 1, 1904, TO MAY 31, 1905.

Eight hundred and forty-four female patients were treated during the year. They were distributed in the different departments as follows:

| | |
|---|---|
| (*a*) General medicine (including nervous diseases) | 283 |
| (*b*) Diseases of the eye | 171 |
| (*c*) Gynecology | 108 |
| (*d*) Diseases of children | 86 |
| (*e*) Diseases of ear, nose and throat | 84 |
| (*f*) Dermatology | 43 |
| (*g*) Surgery | 36 |
| (*h*) Gastrointestinal diseases | 24 |
| (*i*) Genito-urinary diseases | 9 |
| Total | 844 |

Number of cases of gonorrhea in all departments ..... 10

| | |
|---|---|
| (*a*) Gynecology | 5 |
| (*b*) Diseases of children (vaginal) | 3 |
| (*c*) Diseases of the eye | 2 |
| (*d*) Genitourinary disease (vaginal) | 1 |
| Total of cases | 10 |

Classification of gonorrheal cases

| | |
|---|---|
| (*a*) Acute cases | 2 |
| (*b*) Chronic cases | 3 |
| Total | 5 |

Method of diagnosis in gynecologic department:

| | |
|---|---|
| (*a*) By bacteriologic examination | 3 |
| (*b*) By confession of patient (one rape) | 2 |
| (*c*) By clinical symptoms alone | none. |

Location of lesion:

| | | |
|---|---|---|
| (*a*) External organs | 2 | one acute.<br>one chronic. |
| (*b*) Uterus and adnexa | 3 | uterus—1 chronic.<br>ovaries—1 chronic.<br>Pyosalpinx—1 acute. |

Occupation of patients having gonorrhea:

| | |
|---|---|
| (a) Merchant (married) | 1 |
| (b) Housekeeping (married) | 1 |
| (c) Works in family (single) | 1 |
| (d) No occupation (single, probably prostitute) | 1 |
| (e) No occupation (widow, probably prostitute) | 1 |
| Total | 5 |

History of patients in respect to sterility and fecundity:

(a) Sterile, 2; one of them married, the other widow at the present time.
(b) Children, 1; married, had one child fifteen years ago.
(c) Unmarried, no children, 2.

Pregnant since having gonorrhea ..... 0

Grave lesions of pelvic organs in gynecologic cases:

| | |
|---|---|
| (a) Carcinoma | 0 |
| (b) Uterine tumors (fibroid) | 2 |
| (c) Salpingitis, chronic | 1 |
| (d) Pyosalpinx, acute (gonorrheal) | 1 |
| (e) Suppuration of ovary and tube | 1 |
| (f) Ovarian tumors | 0 |
| (g) Ovaritis, non-suppurating | 3 |
| (h) Pelvic inflammation | 1 |

Slight pelvic lesions of gynecologic cases:

| | |
|---|---|
| (a) Prolapse of ovary | 4 |
| (b) Prolapse of uterus | 1 |
| (c) Subinvolution | 1 |
| (d) Superinvolution | 1 |
| (e) Lacerated cervix | 14 |
| (f) Erosion of cervix | 8 |
| (g) Retroversion | 12 |
| (h) Retroflexion | 1 |
| (i) Endometritis (1 gonorrheal) | 10 |
| (k) Acute vaginitis, nonspecific | 2 |
| Acute vaginitis, microscopic ex. | 2 |
| (l) Lacerated perineum | 12 |
| (m) Vaginal chancroid | 1 |
| (n) Pinhole os. | 1 |
| (o) Urethral caruncle | 1 |
| (p) Cystitis (pronounced) | 1 |
| (q) Cystocele and rectocele | 2 |

Organs removed before coming to dispensary:

| | |
|---|---|
| (a) One ovary removed (6 years ago) | 1 |
| (b) Both ovaries removed (1 and 2 years ago) | 2 |

(In one case of prolapse of the uterus there was also an amputation of the cervix and perineorrhaphy some two years ago.)

Cases in which no diagnosis was recorded, 21. In most of these there was insufficient history to draw any conclusion as to nature of trouble.

The percentage of prostitutes in gynecologic departments was probably less than 10 per cent.

### REMARKS ON REPORT.

It will be seen on study of this report that but 87 gynecologic cases are available for study. This shows 5.7 per cent. of patients of this department were subjects of gonorrhea. While, in the whole dispensary, it appears that in 1.2 per cent. of cases was gonorrhea detected.

The records regarding sterility are of no value. Of the grave pelvic lesions, there were 9 cases, of which 1 was due to gonorrheal infection.

### CONCLUSIONS.

1. Acute gonorrhea in the female is easily diagnosed if seen early, when both the smear and culture methods may be employed. In the chronic and subacute cases a positive diagnosis is often impossible. All secondary aids to diagnosis, if necessary, must be considered, such as confession of the patient, sudden onset of inflammatory lesions without other causes.

2. Many cases of gonorrhea in women recover quickly, leaving behind no traces of the disease.

3. Different communities differ in respect to the prevalence of the disease. I submit the following summary of cases which I have collected:

| | Number of women treated. | Having gonorrhea. | Percentage. |
|---|---|---|---|
| City Hospital | 651 | 74 | 11 |
| Bobb's Free Dispensary | 844 | 10 | 1 |
| Private practice | 360 | 4 | 1 |
| | 1855 | | |

These figures can not be taken as an accurate statement; they are only approximately true.

Probably the City Hospital figures are most nearly accurate, but in considering these figures it must be remembered that probably more than 66.6 per cent. of all cases of gonorrhea at that institution occurred in prostitutes, while the number of this class admitted to the hospital is a much smaller percentage of the whole; how much smaller it is impossible to determine, because few women will voluntarily admit to hospital authorities that they are prostitutes.

In the City Hospital report the number of cases of grave lesions of the pelvic organs was 79, of which 19 were gonorrheal and 60 non-gonorrheal cases, 24 per cent.

In Bobb's Free Dispensary there were 9 cases of grave lesions of the pelvic organs, of which 1 was gonorrheal and 8 non-gonorrheal, 11 per cent.

In private cases there were 111 cases demanding grave operative procedures; 15 were gonorrheal and 96 non-gonorrheal; 13 per cent. of operative cases were gonorrheal.

I did not succeed in finding many important facts bearing on the influence of gonorrhea in producing sterility. In my list of 59 cases of primary sterility, 66 per cent. could fairly be attributed to other causes than gonorrhea and but 10 per cent. attributed to gonorrhea; this seems to indicate that gonorrhea as a causative factor in sterility has been overestimated.

### DISCUSSION.

DR. D. H. CRAIG, Boston, said that he has given some attention to the question of differentiation between the inflammatory lesions, acute and chronic, of the pelvic organs of women classified as puerperal lesions and those classified as gonorrheal. That distinction is often made, as though they represented two absolutely distinct classes, but he thinks they do not. A series of cases he has been tabulating brings that out clearly, and he related one case to illustrate his meaning. A woman presented herself at his clinic with a subacute pelvic lesion, accompanied by moderate pain and a leucorrheal discharge, in no sense characteristic, and attributed her trouble to getting up too early after her confinement, on about the eighth day. All her trouble dated definitely from within 48 hours after getting up. Having this distinction in view, careful investigation was made by smears and cultures, and Dr. Craig found that her trouble was due entirely to a not far remote gonorrheal infection. Very strict questioning of the woman demonstrated the fact that her getting up after confinement was preceded by 24 hours by sexual relation with her husband, who admitted that he had contracted gonorrhea during his wife's pregnancy. Without careful investigation, this case would have been termed one of postpuerperal inflammatory lesion in the pelvis, and would have been laid to some other infection having nothing at all to do with gonorrhea. Dr. Craig thinks these cases are common. Morrow speaks particularly of one child sterility. If any one can tell Dr. Craig how a husband having had gonorrhea previous to marriage could be responsible for one-child sterility, he will be glad to learn, but he can understand how the husband contracts gonorrhea during his wife's pregnancy and infects her during the puerperium. The question of figuring out the statistics of the influence of gonorrhea in causing sterility is an impossible one to answer. In the first place, as Dr. Dunning said, 12 per cent. of women admit preventing conception, but what percentage of that number are taking this step unnecessarily? Many women prevent conception for years, and when they want children they can not have them. What percentage of these women were sterile originally and what percentage made themselves sterile? The prevalence of gonorrhea in all classes has been overestimated. No one man will ever give us reliable statistics on that point. In order to get statistics worth having we must take the statistics of every man whose word we can believe and of every man whose investigations are correct and from that make composite statistics of the whole subject. One man taking the cases in a certain locality among a certain class of people can not give correct statistics as to the prevalence of gonorrhea.

DR. A. GOLDSPOHN, Chicago, said that if such statistics as Dr. Dunning mentions have been published they are certainly wrong. Dr. Goldspohn has always had the impression that

gonorrhea was not so prevalent as has been frequently stated. He was not in a position to declare the statement untrue, however, because he supposed that he did not get the class of patients in whom gonorrhea is more prevalent, although he has a considerable practice from a dispensary in connection with a postgraduate school where a large proportion of the patients are colored, and among these gonorrhea is very frequent. As has been stated, it will not be possible to determine the exact number of gonorrheal infections. A little assistance can be obtained, however, by considering what class of pathologic lesions are caused by gonorrheal infections and what class of lesions by puerperal infections. The puerperal uterus is a very different structure having been emptied of a child, say, within a week or two, than is the ordinary gonorrheal uterus. The former has a succulent, thin, very soft, friable cervical wall; whereas the gonorrheal uterus almost never occurs in the puerperal state, and has a cervix that is almost like leather in comparison. In the former the blood vessels and lymphatics are wide open during the first few days after labor. Infection does not have to travel to the endometrium and out in a round-about way to get to the peritoneal cavity. It passes directly through the lymphatics in the wall of the cervix, into the cellular tissue at the side of the cervix, between the layers of the broad ligament, and there is cellulitis (parametritis). Peritonitis and salpingitis, if they occur at all, are secondary to this. The resulting abscess, if it forms, sometimes ruptures, but more frequently it is drained into the vagina. These cases run their course with or without our help, and the patient may not have a salpingitis at all. Gonorrheal infection, on the other hand, usually does not occur in the recent puerperal state, but later, when the ordinary condition of the uterus and cervical canal has been attained. Therefore, the gonorrheal infection, if it passes into the peritoneum at all, as a rule, travels through the endometrium and the tube and then to the peritoneum. There is always an endometritis and salpingitis, with more or less peritonitis. In this connection, it is easy to see that the cases of localized pelvic peritonitis which result in adhesion of the tube or ovary are very much more frequent than are the cases which result in adhesion of the uterus itself. This difference in the gross pathology of the two conditions is a guide in determining the probable nature of the infection in the beginning in either case.

DR. W. O. HENRY, Omaha, declared that, while these statistics are not large enough to be conclusive, yet they are a beginning, and it is to be hoped that other gynecologists will follow Dr. Dunnings' example and tabulate their cases. Dr. Henry believes that not over 30 per cent. of these cases are gonorrheal, but in the future he will tabulate all cases after having examined them carefully.

DR. L. H. DUNNING stated that his object in presenting this paper was to call the attention of the profession to the fact that lesions due to other causes are too frequently ascribed to gonorrheal infection. If physicians will investigate this matter carefully, he thinks they will arrive at results different from those previously reported. He wrote the paper partly as a protest against statements which are being quoted continually as scientific facts and which are not facts.

## Special Article

# IMMUNITY.

## CHAPTER XXX.

### GLANDERS (FARCY).

Under natural conditions the horse is the chief sufferer from glanders or farcy, the former name being applied to the disease as it occurs in the nose, the latter when in the skin. These names are relics of the time when the two forms of the disease were not recognized as identical processes with a common etiology. In either locality the disease may be acute or chronic, and in the horse about 90 per cent. of the cases are chronic. The ass is occasionally infected, and in this animal as well as in man, an acute general infection (bacillemia) frequently develops, in addition to the cutaneous and nasal lesions which characterize the disease. Fortunately, glanders in man is rare. Cows and rats are immune, or nearly so; the sheep, goat and dog have fairly high resistance, although they may be infected artificially; the dog and rabbit are moderately susceptible, and for the guinea-pig and members of the cat family (tiger, lion and leopard), the bacillus is very virulent. Infection of the last named animals has been noted in menageries as the result of feeding them with the meat of a horse which had died of glanders. The acute infection usually is fatal, and complete recovery from the chronic form of the disease is infrequent. Something less than 50 per cent. of the chronic infections in man terminate in recovery.

**Occurrence of the Disease.**

The specific microbe, *Bacillus mallei*, discovered in 1882 by Loeffler and Schütz, is an anaërobic organism which has approximately the morphology and size of the tubercle bacillus, but lacks the acid-fast property of the latter. It stains with anilin dyes, especially carbol fuchsin, but not with Gram's method. With weak staining it shows a granular structure. It grows well on ordinary culture media, showing a characteristic appearance on potato. In favorable media it may produce threads, while under more favorable conditions coccus-like forms are seen. The optimum temperature for growth is from 30 to 40 C.

**Bacillus Mallei.**

The bacillus is only moderately susceptible to sunlight, by which it is killed in about twenty-four hours. It withstands freezing, lives for two to three weeks in a dried condition at room temperature, and is killed by a temperature of from 56 to 60 C. in from ten minutes to one and one-half hours, depending on the amount and character of the medium in which it lies. Its resistance to the ordinary disinfectants (corrosive sublimate, carbolic acid, etc.), is not high. Milk of lime and solutions of calcium chlorid are suitable for the disinfection of stalls. In culture media the organism secretes no soluble toxin, but it contains an endotoxin which probably is one of the constituents in the various preparations of mallein.

**Resistance and Endotoxin.**

The method by which the mallein of Roux and Nocard is prepared is identical with that used in the preparation of the old tuberculin. A virulent strain of the glanders bacillus is allowed to grow for some time (from two weeks to two or three months) in bouillon which contains from 4 to 5 per cent. of glycerin, the culture is then sterilized by heat and the bacteria removed by filtration. The toxin is not destroyed by high temperatures. Other preparations, also called mallein, are made by extracting ground up bacilli with a solution of glycerin and water (Helman, Kalning), or with water alone (Kalning and others); by killing a liquid culture of the bacillus (Bromberg); or by precipitating bouillon filtrates with absolute alcohol (de Schweinitz and Kilbourne), or with ammonium sulphate or magnesium sulphate. The dry powders "morvin" and "dried mallein" are prepared by one or another of these precipitation methods.

**Preparation of Mallein.**

Glanders bacilli are found only in the tissues and secretions of diseased animals, and the nasal discharges of the latter are the chief means of contaminating feed, water and stables through which the disease usually is carried to other animals. The glanders bacillus does not readily penetrate the intact skin and mucous membranes, although occasionally it may gain entrance through the hair follicles or sweat ducts. In the presence of even slight defects in these surfaces, as those caused in the mouth or nostrils of horses by hay or other food, infection readily occurs. According to Nocard, invasion takes place commonly through the gastrointestinal tract following the ingestion of infected feed or water. Although involvement of the intestines and adjacent tissues frequently results, the organisms may become generalized, causing the disease in the nose, skin or other organs, without the establishment of foci in the intestines.

**Distribution of Bacilli and Infection Atria.**

In man infection occurs chiefly through abrasions in the skin, and perhaps also through the nose, to which the bacilli have been carried by soiled fingers or other means. Several cases of acute glanders, ending fatally, have occurred in lab-

oratory workers as the result of accidental inoculation. There appears to be little danger to man in eating the meat of horses in which the disease was localized, provided the meat has been well cooked. Such meat was fed to soldiers in one instance with no ill results.

**Tissue Reactions.**

Variations in the course of the disease and in the intensity of the pathologic changes in different cases probably depend on variations in the resistance of the host and in the virulence of the parasite. In acute general infections in man, following an incubation period of from two to five days, during which the point of inoculation becomes violently inflamed, a severe febrile condition develops, which is accompanied by general pains, swollen joints and a macular eruption. In a short time nodules and indurated cords, made up of a leucocytic exudate, edematous fluid and proliferating connective tissue cells, form in the subcutaneous lymphatic channels, and mark the progress of the infection toward the lymph glands. The nodules, and also the cords, commonly undergo softening, and abscesses form and rupture through the skin. Nodules similar to those in the skin develop in various organs of the body; in the nose they break down and constitute ulcers. In chronic infections the lesions are of the same nature, although they evolve more slowly and tend to remain limited to particular regions. Nasal, pharyngeal, tracheal or pulmonary glanders are forms of the disease which are encountered in the horse. Connective tissue development is more marked in chronic than in acute glanders, although the peculiar liquefaction, suppuration and ulceration of the lesions occurs in the former as well as in the latter. Moderate leucocytosis is found in the blood.

**Protective Processes.**

The nature of the pathologic changes found in glanders, the frequent chronic and the progressive course of the disease, and the fact that infection does not confer distinct immunity, are conditions which ally glanders very closely to tuberculosis, pseudotuberculosis and leprosy. The essential lesion is the "infectious granuloma," and it is probable that the new connective tissue which is formed is to no small extent a factor in limiting the extension of the infection. Nodules of glanders frequently are isolated by the surrounding reaction, the centers caseate and the contents eventually are discharged through the skin; cicatrization and healing in many lesions follow evacuation. Phagocytosis of the bacilli by the epithelioid cells and leucocytes in the nodules is said to be rather extensive. According to Nocard, there is no such thing as an acquired immunity to glanders; chronic glanders may at any time become acute. The cause of the natural immunity of cattle and some other animals seems not to have been determined.

**Serum Therapy and Use of Mallein.**

Treatment of glanders with immune serums has not been successful. Such treatment has been attempted with serum prepared by immunization with mallein (Semmer), and with the serum of diseased animals (Hell and Toeper). The value of mallein in the diagnosis of glanders or farcy is similar to that of tuberculin in tuberculosis. Although it causes a rise in the temperature of normal animals when given in considerable doses, the reaction produced in infected animals is so much more intense, and occurs with so much smaller doses, that it is generally considered as specific in nature. Some doubt, however, has been thrown on the specificity of the reaction from the facts reported by various observers that toxic substances from other organisms, as tuberculin and other preparations from the pneumobacillus of Friedlander, *Bacillus pyocyaneus*, etc., cause similar phenomena in animals suffering from glanders. Wladimiroff asserts, however, that the reactions caused by these substances differ from that of mallein.

For diagnosis a dose must be used which causes no reaction in a normal animal, and this varies with different preparations. The typical reaction has two essential components: 1, A rise in temperature which begins in from six to twelve hours after the injection, reaches its maximum (from 40 to 42 C.) in from six to eight hours later, where it remains for a few hours, then gradually sinks, only to recur on the second day; 2, an edematous and inflammatory tumor at the point of injection, which begins in from six to eight hours, and runs its course in from three to eight days, ending in resorption (Wladimiroff). Veterinarians generally agree that mallein is a valuable diagnostic agent. Mallein also has been used in the treatment of glanders, but with rather doubtful results.

Bacteriologic diagnosis is accomplished by cultivating the bacilli from the abscess or secretions and testing the virulence of the culture by animal experiments (guinea-pig).

**Agglutination.**

Normal horse serum agglutinates the glanders bacillus in dilutions of from 1/200 to 1/700, that of the diseased animal in a strength of from 1/1600 to 1/2000. In some instances, however, infection causes no increase in the agglutinating power of the serum. Agglutinins are said to be formed more readily in man than in animals.

## *Clinical Reports*

### A CASE OF ACROMEGALY.

D'ORSAY HECHT, M.D.

Instructor in Neurology and Chief of the Neurologic Clinic, Northwestern University Medical School; Associate-Attending Neurologist to the Cook County Institutions, Dunning, Ill.

CHICAGO.

*Patient.*—The young woman whose case is herewith reported has been under the care of my colleague, Dr. Ludwig Simon, for several weeks, and I acknowledge my indebtedness to him for the privilege of citation.

*Family History.*—The patient is of Scotch-English descent, was born in Cambridge, England, is 24 years old, single, and at the present time a governess by occupation.

It is interesting to note that Prof. Clifford Albutt diagnosed a carcinoma of the bowel in the paternal grandfather of the patient; a carcinoma of the larynx in an aunt on the maternal side, and an uncle on the maternal side is now afflicted with carcinoma of the bladder. This familial tendency to malignant neoplasms made the patient feel that, perhaps, her headaches and general enlargement were due to a similar growth. Her father, mother, one brother and two sisters are all living and well, though none of them could be called robust. She is certain that no relatives were ever afflicted with a disease answering the description of acromegaly.

*Previous History.*—The patient seems to have had a full complement of illnesses in the past. She recounts attacks of measles, chickenpox, bronchitis, scarlet fever, quinsy, sore throat, rheumatic fever, brain fever, and, lastly, typhoid fever four years ago. Her menses were established at 11 years of age, and the periods have been uniformly painful. Since her typhoid they have been more profuse, except for an interval of four months, from September, 1903, to January, 1904, when the flow remained away altogetner.

Chief interest attaches to her headaches, from which she has been suffering since early childhood. To her knowledge they have never been absent, and when a child at play she had to be very careful of herself for fear of precipitating them. She experienced them always in the form of a right hemicrania, coming on at almost any time of the day, but oftenest late in the afternoon and lasting from one to three days, sometimes attended with nosebleed, but more often with severe vomiting. They came on at regular intervals of two weeks and were called "bilious attacks," because of associated vomiting, which gave her prompt relief. So severe have they been at times that bed rest became imperative. The wearing of glasses has in no way improved these headaches. Since her attack of typhoid and coincident with the progress of her present trouble the cephalalgia is almost of daily occurrence, vesperal in type, of increasing severity, boring and pulling in character, attended with considerable nausea, but no vomiting, and associated at times with a notable puffiness of the fingers and hands, which recedes with the termination of the ache. A younger sister is the only one of her remote or immediate relatives somewhat similarly afflicted.

A little more than four years ago the patient passed through

a prolonged mental storm as the result of opposition to an issue which greatly concerned her future happiness. In the wake of this infelicity there followed nervous prostration and a series of hysterical attacks, one of which eventuated in a "stupor" that lasted several days. Closely following came an illness of typhoid fever, from which, she thinks, she never fully recovered. Physically she always regarded herself as small boned and small featured. It is a family trait, she states, to be dainty and petite. There is no history of trauma. Personal habits are good. The appetite is fair. Of late there has been much drowsiness, but no refreshing sleep.

*Present History.*—(Subjective Complaints.) During the convalescence from typhoid, the patient noticed that she could not get into the clothes that had formerly fit her well. She was

Acromegaly. Photograph taken in June, 1905.

enough larger in the trunk not to be able to wear them. In answer to an inquiry as to the mode of onset and succession of the various enlargements, she states, "I think the features of my face altered first, but then I seemed to get big gradually all over. My growth must have been rapid, for a cousin who had not seen me for a year, on her return, failed to recognize me even in the surroundings of my own home and family." The voice has undergone a notable change of pitch since her attack of typhoid. In her church choir she always sang from soprano scores, but for the past three years the range has been lowered to alto and the voice become harsh. There has been much general malaise, backache and easy fatigue. Added to debility, there is excessive perspiration, and the skin has taken on a somewhat darker and more sallow complexion. She is suffering from violent headaches.

*Status Præsens.*—Physical examination reveals the following: A woman of good stature, erect, appearing fairly well nourished, but presenting a very flabby musculature.

The trunk: The face is oval, elongated from the nose to the chin and disproportionately wide across the brow. The nose, not quite straight, is conspicuously long and the soft parts are unusually fleshy. The lips are larger and thicker than normal. The tongue, on protrusion, is broad and beefy, with its upper surface irregular and deeply furrowed. The lower jaw is considerably longer than normal, but the teeth are set closely together; there are no abnormal dental interspaces. The cranial bones may be somewhat enlarged, but the head does not impress one as being extraordinarily affected. The neck is short and measures 14¼ inches in circumference. Before the attack of typhoid she could wear a number 13 linen collar, and now she requires a large number fourteen. At the juncture of the sternum with the first two or three ribs there is an undue anterior bulging of the broadened thickened bony structure, and I believe that the area of pyramidal dullness noted over this region by Erb in some of his cases can be elicited here. The ribs feel thick.

The limbs: The hands are markedly enlarged in the broad diameter, measuring 8¼ inches; the fingers appear short, thick and stubby, but not clubbed; the normal "tapering" is altogether absent. The thenar and hypothenar eminences are prominent, but soft and flabby. The wrists measure 7 inches in circumference. Before her illness she wore a 5¼ glove and now requires a 6¾, which is a snug fit.

The legs show marked outward bowing and thickening of the shaft of the tibia. The foot is wide, broad and flat and its greatest length from ankle to tip of great toe measures about 10 inches. The great toe is relatively much larger and broader than the others. The ankle is also larger. Formerly she wore a No. 4 shoe; now she requires a No. 6.

The Integument: The skin is of a somewhat dirty yellowish sallow hue, oily and sweaty. The hands feel soft, somewhat pudgy and cool. In the region of the left breast there is a small hairy mole. The breasts are soft, flabby and not very large, but the nipples are broad-tipped and coarse. The hair, besides having become some shades darker, has grown coarse in quality and excessive in quantity. The suprapubic and labial growth is thick, coarse and shaggy, and there is an unusual amount distributed over the limbs, abdomen, back and forearms, which according to the patient's statement has appeared only since the inception of the present trouble.

The Eyes: For the special eye findings I am greatly indebted to Dr. Albert Hale, whose report I insert in full: "The condition of the eyes as I found them in your acromegaly case is as follows: Has worn lenses for ten years. Always been myopic. Her last lenses (from England) were of —4.0Ds., with an astigmatism of 1.50Ds. in each eye. I find that her myopia has probably increased about two diopters, for vision of 6/6 is obtained by the following:

R. O.D. —5.75 Ds. —2.0 Dc. 155 ax.
O.S. —5.75 Ds. —2.0 Dc. 10 ax.

"In examining the eyes themselves, there is found this unusual condition: The pupils are small and unaffected by light or accommodation—symmetrically—but this can not be dependent on a central nervous lesion, because even by using the strongest mydriatic no decided effect on the iris can be produced, the dilation amounting at most to only a millimeter. There is no history of iritis given, and, even if there were, an iritis involving each iris so symmetrically would be extraordinarily rare. I can not find a cause in any other local area to account for it. The fundus shows no peculiarity unconnected with a myopia of this degree. But the smallness of the pupils does not admit of such a careful examination as this report should require."

Internal Organs: The nervous system reveals nothing abnormal except the headache already referred to. There is no vertigo. There is no cranial or peripheral nerve involvement. The knee jerks are very brisk. The heart is normal: pulse, 80, full, and of good tension. The urine is negative. A vaginal examination was not made.

*Treatment.*—The therapy has consisted chiefly in the administration of pituitary extract in tablet form. She has been

taking three-grain tablets three times a day, alternating with palliatives for her headaches and general tonics for the malaise. It has seemed to me that the taking of pituitary extract intensified the headaches and a discontinuance of the drug has marked several periods of improvement.

Since this is merely a case report, the pathogenesis, differential diagnosis and therapy are not discussed.

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## A UNILATERAL PARADOXICAL PULSE.

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*Patient.*—L. A., aged 17. Family and past history were negative.

*History.*—Beginning in March, 1903, the patient was confined to bed for three months owing to a fever that was supposed to be typhoid, with relapse. During this illness he had very little cough or headache, but toward its termination he experienced severe pain in the left side, which lasted about a week and was made worse by cough and by deep inspiration. A week later he noticed, for the first time, that the left side of his chest was smaller than the right. He believes that this change in his chest took place overnight, and he is very certain that it had not existed before his illness. Since this fever he has been troubled more or less with weakness and with dyspnea on exertion. He has at present no edema, cough, or pain in the side.

*Examination.*—This shows a fairly well-developed boy; his color is good, and he is inclined to dyspnea and cyanosis on exertion. Examination of abdominal organs, urine, reflexes, etc., was negative.

Fig. 1.—Sphygmographic tracing from right radial artery showing effect of respiration. A. Deep inspiration. B. Inspiration.

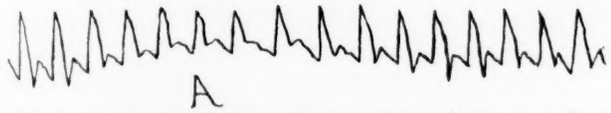


Fig. 2.—Sphygmographic tracing from left radial artery showing effects of respiration. A. Deep inspiration.

Lungs: On inspecting the chest the left side is seen to be much smaller than the right in all its diameters. The left shoulder hangs low, and the left scapula is prominent. The circumference of the right side at the nipple level is 44 cm. on expiration and 46 cm. on inspiration. That of the left side is 36.5 cm. and does not change on respiration. There is a scoliosis to the right in the dorsal region and to the left in the lumbar region. The upper left chest is tympanitically resonant in front as far down as the second intercostal space. It begins here to become dull, and this dullness gradually changes into absolute flatness at the fourth intercostal space. Below this in front and over the whole back the percussion note is flat. The tactile fremitus is increased over the area of resonance, but is diminished over the dullness and flatness. The breath sounds over the upper left front are of the bronchial type; over the upper left back they are distant bronchial. Going down the chest, they become fainter and fainter and are completely absent over the base behind. No râles are heard. The signs in the right chest are such as one might expect over a lung that is doing the work of two.

Heart: The point of maximum cardiac impulse is situated in the fourth intercostal space 7.5 cm. from the median line. The area of cardiac dullness is enlarged somewhat to the right and upward. There is a slight systolic heaving over the whole of the precordium. There is no retraction at the apex and no Broadbent sign. In the second intercostal space just to the left of the sternum a distinct late systolic pulsation is visible which is caused apparently by the movements of the pulmonary artery that has been uncovered by the retraction of the edge of the left lung. The pulmonary second sound is very much accentuated also owing, in great measure, to this retraction of the lung. No murmurs are heard.

Pulses: Under ordinary circumstances the two pulses are of nearly the same size and character. The systolic pressure in each brachial is 116 mm. of mercury (Riva-Rocci, 5-inch cuff). If the patient stands and takes a somewhat deeper inspiration than usual, the right radial pulse becomes small, and if a still deeper breath be taken it disappears entirely (Fig. 1), remaining absent as long as the deep breath is held. Under these circumstances, the brachial and axillary pulses also disappear, but the subclavian can be felt above the clavicle. If the right shoulder be passively elevated during the deep inspiration, the radial pulse may become somewhat smaller, but it does not entirely disappear. The effect of the position of the shoulder is illustrated in another way. If the patient maintains a position of deep inspiration, the radial pulse can be made alternately to appear and to disappear merely by raising and lowering the shoulder. The venous blood flow is not noticeably affected by these maneuvers. Deep respiration does not affect the left radial pulse to any greater degree than is normal (Fig. 2).

*Remarks.*—The retraction and immobility of this patient's left chest apparently depends on extensively thickened pleuritic adhesions, which have obliterated the greater part of the pleural cavity and have led to retraction of the left lung. The disappearance of the right radial pulse on deep inspiration is evidently due to a mechanical cause lying somewhere between the second portion of the subclavian and the upper axillary artery. This cause is active only when the shoulder is hanging low. Two possible explanations of this unilateral paradoxical pulse have suggested themselves to me. First, there may be a compression of the subclavian artery between the clavicle and some underlying structure such as the first rib. The extreme movements of the right chest caused by lack of function in the left would lift the artery unusually high during inspiration so that it could be more easily compressed by a low clavicle. The other possibility is that the artery may be so bound down by adhesions within the chest cavity that it is kinked over the first rib when this is raised during deep inspiration. Elevating the shoulder might prevent such a kinking by lifting the artery off the rib.

This is not the place to discuss the various forms of the paradoxical pulse nor to go into the various causes that may give rise to this symptom. I have been able to find but very few instances of a unilateral pulsus paradoxus recorded in the literature. In Gerhardt's two cases[1] the unilateral disappearance of certain of the pulsations appeared to be due to a localized arteriosclerotic narrowing of the lumen of the corresponding artery, as was demonstrated in one of his cases by an examination after death. Harris[2] has also reported a unilateral pulsus paradoxus in a patient who had a mediastinopericarditis. He believes that the adhesions affected the left subclavian to a greater extent than they did the innominate, but he was unable definitely to prove this at autopsy.

1. C. Gerhardt: Berl. klin. Wochft., 1897, pp. 4 and 283.
2. Thomas Harris: Lancet, 1899, I, p. 1072.

**Causes of Failure.**—Some men fail through their overweening confidence or insufferable conceit. The very first thing a student should do is to gauge properly his abilities. He should never excuse his own mistakes. He can not hope to succeed without a thorough mastery of the technic of his profession. He should never place confidence in unadulterated luck. He should recognize early the advantages of a cool head and a clear eye, and learn to practice the old-fashioned virtues of sustained effort and steady industry, otherwise known as patience and grit. Spasmodic study and investigation are worse than nothing, as they cultivate an unscientific mental attitude. Failure through "dry rot" is of itself compensatory and but simple justice.—*Kansas City Med. Index-Lancet.*

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## THE ESSENTIALS IN STATE SUPERVISION OF INSANE HOSPITALS.

At the recent meeting in Portland of the National Conference of Charities and Correction, the report[1] of the committee on state supervision and administration gave a cheering instance of the more enlightened and scientific view of the treatment of the insane which the public is slowly acquiring. The report reminds us that, at a conservative estimate, the actual yearly increase in the number of insane persons in public institutions in the United States is now at least 5,000, and that the total number cared for by the states has already reached 150,000. Such figures may well cause popular alarm. Whether insanity is relatively increasing or not is still a moot question, but the facts as to the actual increase of the number of insane patients maintained by the states can not be overlooked. In view of these facts the report very properly points out that the neglect of preventive effort in this field is no less than foolhardy. "It is as if a city were to abandon vaccination and content itself with an admirable isolation hospital in which to treat all discovered cases of smallpox."

The report urges as the primary essential of preventive measures, better facilities for the training in psychiatry of medical students, a point which we have emphasized so often in these columns that it is unnecessary to dwell on it here. It describes at length the university hospitals for the insane in Germany, dwelling especially on the admirable care thus secured for the acute patient, as well as on the opportunity for clinical study afforded to the student, and emphasizing a fact not always realized by the public, namely, that nowhere are patients so sure of good medical care as in institutions where teaching is done in the wards. "The university clinic in psychiatry, at its best, is a small, suitably equipped hospital for the insane, serving also for the purpose of a hospital for acute cases in the city in which it is situated. It is maintained by the university, is directed by the head of the department of mental diseases, and is used for instruction of medical students. It has about three times as many nurses as the average asylum, and the patients enjoy the most advanced medical care. In all the German hospitals, and in those of Switzerland and Italy as well, a six months' course in the study of insanity is required, and a student can not obtain his degree without undergoing a special examination which includes the clinical examination of patients. The most distinguished alienists are in charge of these hospitals. Kraepelin at Heidelberg needs only to be mentioned to indicate that the greatest specialists in Germany are not too great to be enlisted in the service of the state. Candidates for government physicians must serve as internes in the public asylums, and no physician is allowed to have charge of a private asylum, who has not served two years as interne in a public asylum, while a dozen years of apprenticeship are usually necessary before a man can attain a superintendency of a public hospital. His superintendency attained, his position is permanent during good service. Thus the state obtains its servants by training them and keeps them by the reward, not of great salaries, but of permanent positions and opportunities for scientific work."

The report quotes extensively from that remarkable document published by the French Republic, to which we have already referred in these columns, "The Report on the Care of the Insane," edited by Dr. P. Serieux, and points out the evident freedom from political domination which characterizes the work of Dr. Serieux. "The point of interest in studying the French attitude toward public care of the insane is not the actual situation of the insane in France. That is strangely like our own in the lack of adequate nursing service, and in the demand for 'business administration' by those who are unconscious of the lines of true economy in humanitarian affairs. It is the fearlessness of the French self-criticism, the candor of her recognition of a superior service, even if it be in the land of her dearest foe, her humble willingness to study wherever there is anything to be learned—this state of the official mind it is which must interest and inspire us."

The fact that in America institutions for the insane are carried on by the separate states and that any criticism of their management in any state is likely to be considered as an attack on the dominant political party in that state, renders a candid discussion or comparison extremely difficult, almost sure to offend the politicians in power, and therefore to result in no good to the institutions. Possibly if this important matter could be the subject of federal inquiry we could attain the independent spirit of the French government. Indeed, we look forward with interest to the appearance of the government statistics on the extent of recognized insanity, which, we are informed, are nearly ready for publication. It may be that they will prove a basis for further governmental inquiry.

The report emphasizes the need of popular education and popular respect for medical standards, and refers to the present status of the Cook County Hospital for the Insane (Chicago) as an excellent illustration of the improvement which can be readily secured when good officials have public backing. "The Cook County Insane Asylum offers an instance of an institution recently lifted from neglect and inefficiency to the highest stand-

1. Report of the Committee on State Supervision and Administration, made by J. C. Lathrop, Hull House, Chicago, at the National Conference of Charities, Portland, Ore., 1905.

ard by the power of public opinion. The case is especially apposite to our argument, because the public interest was not directed toward changes in business management—no charges of fraud or dishonesty were brought—no effort was made to change the financial methods which are well organized and carried on by the paid Board of County Commissioners. It was to create a spirit of humanity and of science and to apply it to the daily lives of the patients that effort was directed. This asylum has become one of the best-conducted in the world, on the medical and nursing side. The moving force in securing this fundamental improvement was an aroused public attention, which insisted suddenly on knowing about the institution, and next demanded, and at once obtained, a better service. It should be added that a controlling majority of the managing board heartily co-operated in the changes which revolutionized the asylum and demonstrated afresh that official boards in this country must have the backing and stimulus of the intelligent public opinion."

The report closes by stating three essentials for an adequate system of state supervision and administration of public institutions as follows: 1. On the one hand, absolute independence of that exploitation which we know as a "political influence," and, on the other hand, strict accountability to the proper state authorities. 2. The enlistment of the finest trained ability in the public service. 3. A sustained intelligent public interest.

## TUBERCULOUS RHEUMATISM.

It must be apparent to all who have followed medical literature for the last few years that the subject of rheumatism has received a good deal of attention. It was surely time that the heterogeneous group of cases which were classed under this name should receive a thorough overhauling. As a result of the restudy of this important subject we have received light on many obscure points, but fresh aspects of the subject have cropped up and need investigation. Among these is the relation which exists between tuberculosis and certain forms of joint disease which do not conform to the classical type of tuberculous arthritis, clinically or pathologically.

Attention was first drawn to these forms of rheumatism several years ago by Poncet, and a great many of the publications on the subject have emanated from this author and his pupils, or from other representatives of the French school. In Germany the matter has received but little attention, while in this country little has been contributed. Only one important contribution on the subject comes to mind, the article of Edsall and Lavenson.[1] The assumption of Poncet and his adherents is that certain forms of joint lesion now classed as chronic rheumatism or arthritis deformans are in reality tuberculous in nature, and due to the action on the joints of the tubercle bacillus or its toxins. Not only chronic forms of rheumatism have been ascribed to this cause, but also certain atypical acute forms. Laub,[2] for example, has recently described as tuberculous rheumatism an attack of acute joint disease, polyarticular in character, in a tuberculous patient with an acute tuberculous pleurisy. The acute form of tuberculous rheumatism is said to differ from ordinary acute articular rheumatism in its atypical course, the moderate swelling and pain in the affected joints, the slight impairment of movement, and the lack of effect of salicylates. This form of the disease is not, however, the most common one, and more frequently we see what Poncet describes as "rhumatisme tuberculeux ankylosant,"[3] which is more chronic and results in a dry fibroarthritis with formation of new bone in the neighborhood of the joint. This form generally begins in one joint and gradually involves others. Poncet has also suggested that certain types of what is clinically classed as arthritis deformans should be grouped with tuberculous rheumatism, as they also are due to the tuberculous poison.

The questions brought up by this work of Poncet are important ones, and worthy of careful consideration. If any objection can be made to Poncet's deductions it is that they are founded too much on pure clinical observation, and not enough on bacteriologic and pathologic research. It is, of course, true that many things suggest the possibility of a relation between tuberculosis and rheumatism. The well-known effects of tuberculous infection on the bones, as seen in the classical Hippocratic fingers, the curious and frequently observed family association of tuberculosis and arthritism, and other suggestive but less striking facts are all important. But the mere association of two diseases does not necessarily mean that they bear any causative relationship to one another unless this association is strikingly frequent. There are doubtless many cases of rheumatism corresponding clinically to Poncet's tuberculous rheumatism in which no signs of tuberculosis are present. In one or two instances tubercle bacilli have been demonstrated in fluid from joints which did not at all present the characteristics of ordinary tubercular arthritis, and in still more instances the administration of tuberculin has resulted in general and local reactions in individuals suffering from what seemed to be chronic rheumatism or arthritis deformans.

Such facts are certainly very suggestive, notwithstanding the fallacies connected with the tuberculin reaction. It is probably fair to assume that there are joint lesions due to the tubercle bacillus or its toxins which are clinically those of chronic rheumatism or arthritis deformans. Whether such lesions are as frequent as Poncet would have us believe is another matter. In view of the small number of cases in which careful bacteriologic tests have been made, and considering the accessibility of the joints to investigation, the wonder is that the subject has not been more thoroughly thrashed out before this.

1. Amer. Jour. Med. Sci., December, 1903.

2. Zeitschrift für Tuberculose, vol. vii, No. 5.

3. See THE JOURNAL, xxxvii, page 1008 and xliv, page 832.

## KNOWLEDGE AND WISDOM IN MEDICINE.

It has become the custom to select some motto which seems particularly to represent a basic principle in one's life work, and to have it framed and hung so as often to come under one's eye. We know of no words of wisdom that could be more precious in this respect for the physician to see frequently than certain lines of Cowper, on knowledge and wisdom. It is not an unusual impression among members of the profession that the more practice a man does and the more hospital appointments he holds, the more likely is he to gain that larger wisdom which enables him to diagnose readily and with assurance and so to be of special service in consultation. There is many a "pluralist" among us holding hospital appointments, the duties of which he is scarcely able to fulfill and yet who is not ready to resign because he feels that the apparent experience which they enable him to gain must somehow prove of use to him in adding to his store of medical wisdom. But alas! the "pluralist" in medicine does quite as much harm as the holder of several ecclesiastical appointments to whom therefore the name was first applied. Like his religious prototype, he harms himself and others. For him surely Cowper's words will show the vanity of over-occupation:

> **Knowledge and wisdom, far from being one,**
> **Have ofttimes no connection. Knowledge dwells**
> **In heads replete with thoughts of other men;**
> **Wisdom in minds attentive to their own.**
> **Knowledge is proud that he has learned so much;**
> **Wisdom is humble that he knows no more.**

The quotation was recently published in Osler's farewell address to Canadian and American medical students, and he added some precious words of his own:[1] "What we call sense or wisdom is knowledge, ready for use, made effective, and bears the same relation to knowledge itself that bread does to wheat. The full knowledge of the parts of a steam engine and the theory of its action may be possessed by a man who could not be trusted to pull the throttle. It is only by collecting data and using them that you can get sense. One of the most delightful sayings of antiquity is the remark of Heraclitus on his predecessors—that they had much knowledge, but no sense, which indicates that the noble old Ephesian had a keen appreciation of their difference; and the distinction, too, is well drawn by Tennyson: 'Knowledge comes, but Wisdom lingers.'"

As we read we are reminded of some of the most salient facts in the history of modern medicine: Auenbrugger, plodded along patiently in his small, obscure hospital in Vienna cultivating wisdom rather than gathering information, while the presumedly great medical geniuses who were supposed to be adding to medical knowledge were at work in the general hospital with all its clinical facilities, yet the younger, unknown worker solved one of the most important of diagnostic problems and gave us the first foundation stone of thoracic diagnostics. Young Jenner, as a country practitioner, worked out the problem of vaccination, with all that it was to be of benefit to the race. Corrigan studied hard at his little hospital in Jarvis street, Dublin, which had only six beds altogether, and yet in three years he laid the foundation, practically, of all the assured knowledge that we have with regard to aortic diseases. Surely in medicine it is *multum, non multa* that counts; much wisdom, not the knowledge of many things, and least of all superficial information about many things. The first modern physician, whom we are glad to recognize as a great professional brother, as well as distinguished writer, Rabelais, began the railing at useless information and the volumes of it that so many people consume, and it would be worth our while to take his lessons to heart even in the twentieth century.

1. Medical News and St. Louis Medical Review, Sept. 30, 1905.

## CAUSES OF THE DESTRUCTION OF THE BACTERIA IN THE SMALL INTESTINE.

Rolly and Liebermeister,[1] two German investigators, have undertaken to discover experimentally the causes of the destruction of bacteria in the small intestine. Rabbits were employed by these investigators. Their first effort was to find out if the contents of the small intestine were sterile or not. They showed by the number of colonies on agar plates that there were only a small number of bacteria present, there being more in the lower ileum. They next wished to discover if bacteria introduced into the small intestine were killed or their growth hindered. Various kinds of bacteria were introduced into the intestine, the stomach having been previously cut off to prevent the entrance of its contents. The results were the same with all the bacteria employed. It was found that the bacteria, if not too many, were destroyed in part by the intestine, some of them being removed by peristalsis, so that after a certain time the small intestine was almost sterile.

Having shown that the small intestine had a definite bactericidal power, they next endeavored to determine the mechanism of this action. Six possibilities were to be considered—peristalsis, intestinal juices, living intestinal wall, bile, acidity of chyme and alteration of the reaction in different parts of the intestine. By rotation of reagent glasses, containing sterile bouillon and various kinds of bacteria, it was observed that motion had no effect on the growth of bacteria, and the authors concluded, therefore, that peristalsis in itself has no bactericidal power. The fact that bacteria flourish when peristalsis is diminished, causing an abnormal stagnation, is due to other causes. The intestinal juice, pancreatic juice and bile, alone or combined, were found to have no bactericidal action, but on the contrary, to furnish good culture media for the growth of microorganisms. The bactericidal action of the living intestinal wall was next tested. By tying off loops of intestine under otherwise normal conditions, they found

1. Deut. Archiv. f. klin. Med., 1905, lxxxiii, p. 413. Abstract in THE JOURNAL on page 1284.

soon afterward a diminution in the growth or complete death of the bacteria. The exact cause of this action remains unknown.

It was found further, that if the intestinal mucosa is injured, bacteria can grow unhindered. This bactericidal power of the normal, living intestine is the same whether acting alone or in combination with bile or pancreatic secretion. The acidity of the chyme as it enters the small intestine has an inhibitory effect on the growth of bacteria. If the stomach contents are neutralized many more bacteria are carried into the intestine than otherwise. The authors consider that although peristalsis by itself has no direct effect on the growth of bacteria, by quickly carrying bacteria from a fluid of one reaction to that of another, it serves to prohibit abundant growth, since different bacteria require different reactions for their best growth.

It is worthy of special emphasis that if the mucous membrane of the small intestine is injured an enormous growth of bacteria results. This was found to occur whether the reaction was acid or alkaline. The conclusions are reached, consequently, that the mucous membrane of the small intestine has the power of protecting the small intestine from bacteria by destroying them, and, further, that if the mucosa is inflamed or changed in other ways it loses this power, and the intestinal contents now furnish a good medium for bacterial growth.

While the results of these investigations on the rabbit can not be applied directly and with full force to human beings, yet they help us to understand better certain phases of intestinal infection in man. For instance, there may be found to exist a natural, local immunity of the intestinal wall to the typhoid bacillus, infection with which perhaps can not take place without previous mechanical or chemical lesions of the wall itself. In this way may be explained, at least in part, the fact that so many persons escape typhoid fever under conditions that surely must lead to the presence of typhoid bacilli in the intestinal contents. We know that in times of cholera and dysentery epidemics individuals may harbor the respective bacilli in the intestinal tract without any recognizable harmful results, i. e., without infection. Now, it may be that in such cases there was no disturbance of the intestinal wall sufficient to upset its normal resistance. In connection with this, the suggestion may be made that the acquired immunity to typhoid fever and cholera, which seems to persist long after the disappearance of the newly developed antibodies in the blood, may depend on an acquired local immunity of the intestinal wall.

## "PERUNA AND THE BRACERS."

The exposure of the alcoholic nostrum is now fairly complete. Well begun by the *Ladies' Home Journal*, the task was last week well rounded out by *Collier's Weekly*. Samuel Hopkins Adams' article entitled "Peruna and the Bracers" proved even more extended and more informing than was anticipated. Many of his facts are more or less familiar to physicians, but more are not. Medical men should read the article and call it to the attention of their patients. Showing that the drug content of peruna is less than one-half of 1 per cent., and that the alcohol content is about 23 per cent., Mr. Adams appears to make it inevitable that the manufacturer and the retailers of this nostrum are to feel the full weight of the new ruling of the United States Commissioner of Internal Revenue as to the imposition of the internal revenue liquor tax. The cost of peruna being 7 to 8 cents a bottle and the retail price $1, it is not hard to see where the fortunes come from. The direct testimony of the production of intoxication—even of fatal narcosis—as well as of chronic alcoholism, should stir the sense of justice of the most negligent. In the prohibition districts of our southern states the consumption of peruna as an intoxicating beverage is so great that Mr. Adams says a number of southern newspapers are advertising a cure for the "peruna habit." Physicians will be interested to learn from this article that two popular nostrums, one of which is advertised to physicians, are owned by a distilling company. For the injurious traffic in "the bracers" two remedies are proposed: (1) "That the government no longer permit liquors to disguise themselves as patent medicines"; and (2) that the manufacturers be compelled to "label every bottle with the percentage of alcohol it contains." The first is now being applied by the Commissioner of Internal Revenue; the second will be provided for if Congress will enact this winter the pure food and drug bill that is so insistently demanded. Of course, the wide publicity itself is certain to have a marked restraining effect on the innocent purchasers of the disguised alcoholics by persons seeking "medicine." Physicians now can aid the reform in two ways: First, by working hard for the passage of the pure food and drug bill, and second, by exercising moral suasion on the proprietors of the newspapers which are active partners in the destructive trade.

## THE UNIVERSAL CRAVING FOR ALCOHOL.

Medical readers are familiar with the statistics of the liquor trade in this and in other countries. The per capita consumption of spirits and malt liquors by all nations is appalling in its proportions, and has long been the occasion for grave concern on the part of thoughtful publicists. Present revelations of the magnitude and ubiquitous pervasiveness of the traffic in alcoholic nostrums are staggering. The per capita consumption of these thinly disguised liquors escapes the statistician, but the rapidly amassed wealth of the purveyors of the fraudulent "tonics" and "bitters" testifies loudly to the tremendous extent of the business. As these exposures proceed, the public sees that many of the active opponents of the open liquor traffic are themselves tipplers. Women, children, clergymen, temperance workers, are the victims of this dreadful trade. All this can mean but one thing, namely, that the craving for alcohol is all but universal. All that is needed to arouse the taste is the first sample, and the canny compounders of the alcoholic nostrum take full advantage of this human weakness, adding to the enormity of their crime by selling their wares under

false pretenses. Because of this craving for alcohol the public can not be left to care for itself against the disguised liquors. The label must tell the composition of the nostrum, so that the weak and wholly innocent may be protected.

## FOUND DROWNED ON LAND.

A curious fact, if it is such, that may have some medicolegal importance, is reported in the press dispatches from London. A man was found dead in a field near a brook, and the medical testimony was that drowning was the cause of death. The evidence seemed to show that he had fallen into the water and that he had been able to crawl out but had practically drowned on dry ground from the water he had taken in. The possibility of a man's being able to get out of the water and still being unable to free his lungs and therefore practically drowning on dry land is not altogether unsupposable, though little is said of it in works on medical jurisprudence.

## HOURS OF SLEEP FOR SCHOOL CHILDREN.

It will scarcely be denied that many of the ills of modern life can be traced to overwork and under-rest. Work and rest are habits and they can be cultivated so as to yield mutually the most productive results. The need for sleep varies with the individual. The average adult requires not less than eight hours in twenty-four. While some seem to be able to do well with less, not a few are better for more. Old persons generally get less —at least they do not sleep so long consecutively; but they can take additional rest with advantage in the middle of the day. Without question, children should invariably secure more than eight hours of sleep in each day. The new-born infant sleeps almost all the time, and the young child should receive a maximum amount of sleep. The growing boy or girl requires a large amount of sleep to compensate for the expenditure of energy in growth and development, and a similar statement is applicable to the youth of both sexes at school. In an interesting communication dealing with some phases of this subject, Dr. T. D. Acland[1] points out that in not a few of the great public schools of England an insufficient number of hours are allowed for sleep, in some institutions in defiance of the recommendations of an appointed medical officer. The conditions are more satisfactory in the United States. As the result of an inquiry among masters and medical officers of schools, physiologists and physicians, the conclusion is reached that growing boys need from nine to ten hours of sleep. Rather more is required in the winter than in the summer. Not only the quantity but the quality of the sleep must be taken into consideration. Among influences contributing to the latter are darkness, freedom from noise and other disturbance, a comfortable degree of heat and proper ventilation. A factor of great importance that is often ignored is the inculcation of the habit of sleep with respect to both regularity and time.

1. Lancet, July 15, 1905, p. 136.

## "HUMANE" MURDER.

In his "Blithedale Romance," Hawthorne remarks that the woman reformer, in her attacks on society, has an instinctive sense of where the life lies, and is inclined to aim directly at the spot. However true or otherwise this may be in a general way, there have been striking illustrations of it of late. During the past few months an irregular medical practitioner of the sex usually called the "gentler," strongly advocated, in a meeting of her own sect, the killing off of the degenerates, and was flattered by an extensive press appreciation in the way of quotation and republication. Still more recently, a woman, a delegate to the American Humane Association, offered a resolution asking for the legalization of the murder by anesthetics of persons painfully and fatally injured, and advocated also the same for persons suffering from lockjaw, consumption and other painful and hopeless diseases. Her resolution was very properly ruled out by the presiding officer, but that it should have been offered is a rather striking commentary on the extreme views that are held by some would-be philanthropists. Ill-balanced reformers, with an imperfect or twisted moral sense, are always too common, and the publicity of their vagaries is often a serious drawback to progress in real and necessary reforms. One of the most objectionable facts in connection with this class is the unscrupulousness with which persons like the one referred to claim the indorsement of others for their own peculiar individual hobbies. The woman referred to, it is said, quoted the names of prominent clergymen and others as favoring her idea. Apparently, she did not venture to quote the names of reputable medical men, and for that we are thankful.

## THE NEED OF AN ANATOMIC LAW IN TEXAS.

An anomalous condition—at least anomalous at this age—exists in the state of Texas. Practitioners of medicine are required to have a knowledge of the human body and medical colleges are chartered to teach the science and art of medicine in that state, and yet there is no legal provision whereby the student or the physician can secure the dissecting material. To desecrate a grave in Texas is a crime punishable by six months' imprisonment, or a fine of $500 or less. To disinter or to carry away any human body or the remains thereof, or to conceal it knowing it to be illegally disinterred, is a crime punishable by a fine not exceeding $2,000. It is legal to dissect bodies before burial, but it is impossible to secure them legally. In 1900 a measure to legalize means of providing dissection material passed the legislature, but the governor vetoed it. In 1904 a bill was prepared containing provisions which, it was thought, would prevent any of the abuses which had been feared by the public, and yet it was impossible to secure a vote in the senate on the question. The profession of Texas certainly deserves better treatment than this. It has been suggested that in suits for malpractice it would be a legal defense in the state of Texas to show that the laws of the state, if adhered to, prevent the student or the practitioner from securing a working knowledge of the human body, and that, therefore, a suit for malpractice could not stand. The situation de-

mands a prompt remedy, and we trust that our Texas brethren will leave no stone unturned until they are allowed to use unclaimed bodies, instead of the present necessity of resorting to illegal means.

## PRESCRIPTION GRAFT.

Now that lay journals are aiding in the exposure of the evils of the nostrum traffic, there is increasing lay interest and discussion of medical affairs. Thus we find reference to druggists paying commissions to physicians on prescriptions, and of course the practice properly is condemned. It is indefensible, and we hope it is not sufficiently common to need more than passing remark. As the public becomes better posted on these points, the offender in this respect must not be surprised when he meets with exposure and loss of professional standing. Such methods are certain of ultimate discovery, and it is folly to risk one's reputation for so petty and so mercenary a stake.

## COLLABORATION OF THE PRESS IN SCIENTIFIC CONGRESSES.

In an able review of the work accomplished by the International Tuberculosis Congress at Paris last month, the *Semaine Médicale* of Paris comments on the way in which the lay press seized the opportunity of the congress to insert advertisements in its reading text. At the opening of the congress the secretary general remarked: "Thanks to the generous and untiring collaboration of the press, not only the scientific, but the literary and political press, this congress will be able to spread throughout the world the idea of the solidarity of all human races in respect to tuberculosis. The seed has fallen into good ground." The article continues: "The lay journals gave plenty of space to accounts of the congress, but these journals—which give such ample hospitality to the flaunting advertisements of shameless irregulars—can they be relied on to propagate sound ideas in regard to the struggle against the redoubtable scourge? No illusions could be retained after seeing in one of these journals the detailed program of the congress followed by a recommendation of an establishment for the cure of tuberculosis. Under the heading 'Tuberculosis Congress,' was the following notice: 'At the moment when the antituberculosis congress is on the point of convening, we must call attention to the cures obtained at the medical institute of ————' (giving the name and address of the institute, hours for consultations, etc.). A few days later, in the same journal, the report of the congress was followed by a paragraph to the effect that 'the omnipresence of the tubercle bacillus is the main point established by the congress, but the destruction of the bacillus is still under discussion. The members of the congress, however, recognized that the ———— company has found the elegant solution of this problem.' After these experiences it would require the optimism of a Pangloss to maintain that a scientific congress can count on the useful collaboration of the political press, and that 'the seed has fallen into good ground.' Unfortunately, it is not in the political press alone that the advertisements press close on the report of the Tuberculosis Congress. We have seen a certain medical journal, in one of its most recent issues, recording the transactions of the congress, devote one-half of each of the congress pages to advertisements of medicines for tuberculosis, dividing the page equally between the congress and the ads." The writer probably refers to the issue of the *Presse Médicale* for October 6, which bears the special heading "Congrès International de la Tuberculose, No. 80 (Supplémentaire)." The upper half of twelve pages is devoted to the congress, while the lower half of eight of them contains a running advertisement of medicines to use in tuberculosis. Our contemporaries across the water have commercialism to hold in check, it seems, as do we on this side.

## WOMEN STUDENTS AND THE STUDY OF ANATOMY.

At a recent meeting, the Melbourne University council, according to the *Australasian Medical Gazette*, discussed the question of the accommodation for women medical students in the study of anatomy. It was pointed out that as the women occupy a separate room they are at a disadvantage, and one of the professors expressed a decided opinion in favor of the men and women using the same dissecting room, but he said that the women, in view of opinions being expressed that there was impropriety in the practice, did not care to adopt it. As the *Gazette* points out, if women are to be admitted to the medical curriculum at all, and especially if they attend coeducational schools, they must be prepared to work alongside of men students throughout their whole course; and any suggestion that they should receive separate instruction is based on false sentiment. The two sexes must meet in the postmortem room and in the hospital wards, and if they must be associated in the later part of their curriculum, surely there can be no objection to such a practice when they are studying anatomy. There need be no more impropriety in the conscientious study of human anatomy than in the study of botany or biology; the impropriety is not in the subject, but in the attitude of mind of the student.

## "INTERNAL" VACCINATION.

An Iowa judge has recently ruled against a local board of health which had refused to admit to the public schools pupils who had only ingested vaccine matter in the manner endorsed by certain members of the homeopathic school of practice instead of by direct inoculation. It was held that a method of vaccination endorsed by one of the recognized schools of medicine could not be discriminated against by any local health board. It is unfortunate that such matters have to be left to lay judges to decide. THE JOURNAL has already expressed an opinion regarding the value of this method of vaccination. The situation affords an opportunity for some of those who do not advocate this method to observe some of its possible effects.

**Therapeutic Misinformation.**—Certain writers have asserted that an alkali given before eating always increases the secretion of HCl, and given after meals lessens it. This is not true. This piece of misinformation has been handed down from the time of Sydney Ringer at least.—Boardman Reed.

# Medical News

## ARKANSAS.

**New Hospital.**—A new Catholic hospital has been established at Fort Smith.

**College Opens.**—The twenty-seventh annual session of the Medical Department of the Arkansas University, Little Rock, began October 16, the opening address being delivered by Dr. Edwin Bentley, dean of the faculty.

**Fined for Prescribing Baths.**—Dr. Thomas B. Rider, Hot Springs, was arrested October 3 by a deputy United States marshal on the charge of prescribing hot water baths for patients, he being an unregistered physician. On his trial October 4 he was fined $50 and costs.

**Personal.**—Dr. John Hern, interne at the City Hospital, Little Rock, has resigned and gone to Tucson, Ariz., for his health. ——Dr. Milton Vaughan has resigned as contract surgeon United States Army and will resume practice in Little Rock. ——Dr. George W. Hudspeth, Little Rock, was operated on for kidney disease October 6 at St. Vincent Infirmary. He is reported making favorable progress toward recovery.——Dr. Edmund D. Shortledge, United States Army, who has been spending some time in Hot Springs, has returned to his home in Wilmington, Del.

## CALIFORNIA.

**Personal.**—Dr. Maude Noble, San Francisco, sailed for home from Antwerp November 4.

**County Hospital Too Small.**—Although the Los Angeles County Hospital was completed less than a year ago, all but 20 of its 212 beds are occupied, with the worst months for illness—December and January—yet to be heard from. The entire capacity of the hospital is 250 beds.

**Guilty of Assault.**—Dr. L. T. Holland, Los Angeles, formerly coroner of Los Angeles County, on October 13 was fined $30 for battery on Mrs. Eliza Flick. Mrs. Flick alleges that Dr. Holland struck her a blow on October 3, when she demanded rent due her. The physician claims that Mrs. Flick ran into his fist.

**Crusade for Pure Milk.**—The board of health of Los Angeles and the city health officer have recently inaugurated a crusade for pure milk. After personal visitation of dairies within and outside of the city limits, followed with analyses by the city bacteriologist, the board has decided that a dairy selling milk which contains more than 500,000 colonies of bacteria to the cubic centimeter shall be the subject of investigation.

**Sent to Asylum.**—Dr. Frederick W. Harris, San Francisco, appeared before the lunacy commissioners October 8 and begged to be committed to an asylum. After examination he was committed to the Agnew State Hospital.——Dr. W. N. Moore, Ukiah, county physician of Mendocino County, was committed to the Mendocino State Hospital, Ukiah, October 17. He was once elected medical superintendent of this hospital, but lost the position in the legal contest which followed.

**Physician Assaulted.**—Dr. James F. Rinehart, Oakland, has sworn out a warrant for the arrest of John Rose, a saloonkeeper, on the charge of assault with a deadly weapon. The physician states that he called on Rose to collect a bill of $42.50, but that Rose refused to pay, tendering $25. On Dr. Rinehart's refusal to accept this amount, it is said that Rose picked up a club and, without warning, struck the physician a blow on the head which felled him to the floor insensible.

## DISTRICT OF COLUMBIA.

**Needs Larger Appropriation.**—Dr. William C. Woodworth, Washington, health officer of the district, has asked for an appropriation of $141,240 for the health department for the next fiscal year. This is an increase of $48,460 over the amount asked for last year.

**Obstetrical and Gynecological Society.**—The annual meeting of the Washington Obstetrical and Gynecological Society was held October 30. The election of officers resulted as follows: Dr. George N. Acker, president; Dr. Miller, secretary; Dr. Prentiss, treasurer, and Dr. Loren P. T. Johnson, corresponding secretary.

**Health of the District.**—The report of the health officer for the week ended October 21 shows the total deaths to have been 108—white 57, colored 51; births, 131—white 88, colored 43; stillbirths, 16—white 7, colored 9. There were under treatment at the close of the week 29 cases of diphtheria, 8 of scarlet fever, 205 of typhoid fever and 1 of smallpox.

**New Medical Society Formed.**—The George Washington Alumni Association (medical branch) met October 21 and formed a new medical society for its members. It is proposed to hold meetings monthly during the scholastic year. Dr. A. Barnes Hooe was elected president, Dr. John W. Chappell, vice-president; Dr. Daniel W. Prentiss, secretary, and Dr. Louis Taylor, treasurer.

**Report of the Surgeon-General of the Navy.**—Surgeon-General Presley M. Rixey of the Navy, in his annual report recommends enlarging the Naval Hospital at Norfolk, Va., to a capacity of 300 patients, and the establishment of a hospital or camp at Park Royal, S. C., for the care and treatment of tuberculosis. He also recommends extensive improvements in the hospital at Pensacola, Fla.

**Hospital Named in Honor of Walter Reed.**—By order of the War Department the Army General Hospital, which will be constructed in the District of Columbia, under the authority conferred by the act of Congress approved March 3, 1905, will be known as the Walter Reed United States Army General Hospital, in honor of the late Major Walter Reed, surgeon, United States Army, "whose demonstration of the mode of transmission of yellow fever is of the highest public importance."

**Student's Suit Still Rejected.**—On October 21 Judge Barnard refused a writ of mandamus to Frank A. Davis, a medical student, who holds a diploma from the medical department of Howard University, and who sought to compel the District Board of Medical Supervisors to allow him to take the examination for a physician's license. The medical supervisors, however, took a different view, holding that a two years' course in pharmacy was not equivalent to one year in medicine and that, therefore, the applicant had not completed the four years' study required by the law.

**Freedman's Hospital Report.**—In his report to the Secretary of the Interior Dr. William A. Warfield, the surgeon in charge, says:

> The most important event affecting the management of the hospital occurred when Congress, by the sundry civil act, approved March 3, unified the management under the Department of the Interior, in accordance with the recommendation contained in your last annual report. Although it has been only two months since the change became operative the wisdom of the act has been clearly demonstrated, and it is further emphasized by the lack of embarassment which so frequently proceeded from a dual control of the hospital, and the facility with which supplies are now received.
>
> In compliance with the act above referred to, patients from the District of Columbia are now admitted to the hospital on a contract basis. The hospital receives from the board of charities of the District of Columbia $1.10 per day for the care and treatment of all persons over twelve years of age, 65 cents per day for those under 12 years, and 40 cents per day for those born in the hospital, Congress having appropriated $25,500 for the same. This sum will not be sufficient to care for the District of Columbia patients throughout the present year if the rate of admissions continues as high as during July and August.
>
> Two thousand nine hundred and eighteen were admitted, 187 were born in the hospital and 114 were remaining July 1, 1904, making a total of 3,219 under care during the year; 3,066 were discharged, leaving 153 in the hospital July 1, 1905, as against 114 the preceding year. Of the number discharged, 1,997 were cured, 424 were improved, 191 unimproved, 66 not treated and 201 died.

## GEORGIA.

**Had No License.**—"Dr." W. C. Williams, a colored individual of Atlanta, at whose office all diseases were alleged to be cured, was fined $25 and costs September 18 for practicing medicine without a license.

**Health Board Wants Prompt Report.**—The Augusta board of health has sent out personal letters to the physicians of the city urging on them the necessity of full and prompt reports of all communicable diseases and of births and deaths.

**Personal.**—Dr. W. Monroe Smith, Atlanta, was fined $15.75 September 27 for exceeding the automobile speed limit.——Dr. Eben G. Russ, formerly of Atlanta, who has been ill at St. Mary's, Pa., is convalescent and has been taken to Atlantic City, N. J.

**To Observe Ethics.**—The Muskogee County Medical Society, at its regular meeting, October 4, adopted a resolution requesting the newspapers of the city not to publish the names of attending physicians in their accounts of accidents. The object of the resolution is to prevent even the semblance of advertising on the part of the physician.

**Medical Schools Opened.**—The Medical College of Georgia, Augusta, was formally opened October 2 for its seventy-fourth term with an address by Dr. De Saussure Ford.——The Atlanta College of Physicians and Surgeons held its opening exercises October 5, when the new president, Dr. William S. Elkins, and Drs. Hunter P. Cooper, William P. Nicholson and Abner W. Calhoun made short addresses.——The Atlanta

School of Medicine was formally opened October 3 with addresses by Governor Northen and the board of trustees, Drs. William S. Kendrick, Charles D. Hurt and Edward G. Jones. The school applied on the same day for a charter, the application stating that the institution will not be for gain, but that its objects are to teach the practice of medicine, surgery, dental surgery and pharmacy, and to establish a school for training nurses.

**Training School for Medical Missionaries.**—A training school for medical missionaries was opened in Atlanta September 1. The institution admits both men and women, and the degree of doctor of medicine will be conferred on the completion of the legal requirements and the passage of the examination required by the state. The faculty comprises the following: Dr. James McFadden Gaston, dean of the faculty, professor of principles and practice of surgery, and lecturer on chemistry; Dr. Joseph H. Green, professor of obstetrics and diseases of women, and lecturer on anatomy; Dr. Ephraim Smith, professor of physiology and lecturer on histology and clinical medicine; Dr. Edmond Lee Awtry, professor of materia medica and therapeutics and lecturer on diseases of children; Dr. George Brown, professor of diseases of the eye, ear, nose and throat; Dr. William S. Wood, professor of principles and practice of medicine; Dr. J. Chester King, associate professor of diseases of nervous system; Dr. Walter B. Emery, associate professor of genitourinary diseases; Dr. J. W. Duncan, associate professor of diseases of chest and clinical medicine; Dr. Charles F. Maddox, associate professor of diseases of the eye, ear, nose and throat; Dr. Isaac T. Catron, professor of military and naval surgery, assistant to the chair of surgery; Dr. H. Bak, lecturer on tropical diseases and internal medicine; Dr. Willis B. Parks, professor of psychology; Dr. Ludwig Amster, lecturer on gastrointestinal diseases, and Dr. Thomas C. Longino, demonstrator of anatomy.

## ILLINOIS.

**Hospital Established.**—The Cairo Colored Hospital has been incorporated by Fannie Williams, Nancy Bugg and Adminia A. Watkins to maintain a charitable hospital for the colored indigent sick and a training school for colored nurses.

**Civil Service in State Institutions.**—By the law which became operative November 1 all the charitable institutions of the state will be under the civil service law. This will carry with it the application of the merit system to the employment of several hundred servants of the state, and should result in the betterment of the care and treatment of the insane, the helpless and the diseased.

**Personal.**—Dr. Alpheus A. Bondurant, Cairo, has gone to St. Mary's Infirmary for beneficial rest and change after his illness.——Dr. and Mrs. Frederick W. Werner, Joliet, have returned from Washington.——Dr. Fred. J. Parkhurst, Danvers, is taking a trip through Texas and Mexico.——Dr. Edward Bollenger has resigned as a member of the medical staff of the Illinois Eastern Hospital for the Insane, Kankakee.

**Military Tract Officers.**—At the sixty-sixth annual meeting of the Military Tract Medical Association, held in Canton October 19, the following officers were elected: President, Dr. Ralph C. Matheny, Galesburg; vice-presidents, Drs. W. E. Shallenberger, Canton, and John P. Roark, Bushnell; secretary-treasurer, Dr. Franklin E. Wallace, Monmouth; censors, Drs. Joseph B. Bacon, Macomb; Sumner M. Miller, Peoria, and Maude T. Rogers, Cuba; committee on necrology, Dr. William E. Grigsby, Blandinsville. Dr. James E. Coleman, Canton, was appointed delegate from the society to the Senn banquet, in Chicago, November 11.

**Anticipating Merit Rule.**—The governor has made numerous changes in the staffs of the charitable institutions of the state, to take effect before November 1, when the new state civil service law becomes operative. Among these appointments are the following: Dr. George A. Zeller, reappointed superintendent of the Illinois Hospital for the Incurable Insane, Bartonville; Drs. Walls, Chicago Heights; William H. O. Galland, Charles G. S. Rydin, and Wells, Chicago, at the Illinois Eastern Hospital for the Insane, at Hospital, and Drs. Frank H. Jenks, Aurora, and Ira O. Paul, Winnebago, at the Illinois Northern Hospital for the Insane, Elgin.

### Chicago.

**Donations to Charities.**—The Schwabenverein, at its quarterly meeting, donated $2,500 to the charities of Chicago and vicinity, $1,250 of which went to hospitals.

**Stricken with Paralysis.**—Dr. Julius W. Oswald, who suffered a cerebral hemorrhage while operating at Alexian Brothers' Hospital, October 31, is reported as slightly improved, but paralysis of the right side remains. He is in a grave condition.

**American Academy of Medicine to Meet.**—This body will hold its thirtieth annual meeting in Chicago, November 9 to 10. Physicians and others interested will be welcome at the open sessions, November 9 at 11 a. m. and 8 p. m., and November 10 at 10:30 a. m. The program was published in THE JOURNAL, October 14, page 1178.

**Increase of Diphtheria.**—Diphtheria continues to increase most markedly in South Chicago, Kensington and Burnside. Of the 113 cases reported during the week 33 were on the North Side, 28 on the West Side and 52 on the South Side. Of the 52 cases 24 were in the district south of Eightieth Street. Sixteen deaths were reported from the disease during the week.

**Deaths of the Week.**—During the week ended October 28, 470 deaths were reported, equivalent to an annual death rate of 12.30 per 1,000. Four more deaths occurred than in the previous week and 58 more than in the corresponding week of 1904. Consumption takes the lead in death causes with 61, followed by pneumonia and heart diseases, each with 53; acute intestinal diseases with 45, Bright's disease and cancer, each with 36, and violence, including suicide, with 32.

**Antitoxin Always on Hand.**—The commissioner of health calls attention to the fact that by the revised municipal code the commissioner of health is required at all times to keep on hand "a sufficient quantity of antitoxin to permit the treatment therewith of any dependent or deserving person who shall apply to him for that purpose, and that he shall, without charge, treat with antitoxin any and all persons who may apply to him for such treatment, and who, in his opinion, require such treatment."

**American College of Medicine and Surgery.**—This college, the medical department of Valparaiso University, and located at 339 South Lincoln Street, Chicago, has made extensive changes in its policy and in the personnel of its faculty. Formerly an eclectic school, it has ceased to be sectarian and has made application for membership in the American Association of Medical Colleges, claiming that it has conformed its curriculum to the requirements of that body. Many new members have been added to the faculty and the few old members remaining have applied for membership in the Chicago Medical Society. The following are the heads of departments in the reorganized school: Henry S. Tucker, dean, gynecology; Ross C. Whitman, pathology and medicine; Victor J. Baccus, surgery; J. Newton Roe, chemistry; Charles H. Francis, secretary, ophthalmology; Henry F. Lewis, obstetrics; Henry G. Anthony, dermatology, genitourinary and venereal diseases; Leonard L. Skelton, neurology; Robert H. Good, laryngology and rhinology; George J. Tobias, hygiene and preventive medicine; George F. Butler, therapeutics; William L. Copeland, anatomy; Mason L. Weems, physiology.

## INDIANA.

**In the Hands of the Law.**—Leslie N. Beaven, an osteopath of Vincennes, was fined $25 and costs October 18 for practicing medicine without a license.

**Diphtheria Epidemic.**—The schools of Princeton have been closed on account of an epidemic of diphtheria.——As a result of diphtheria at Newton the public schools of the town have been closed.

**Cornerstone Laid.**—The cornerstone of the administration building of the Methodist Hospital, Indianapolis, the first and largest of the group of buildings to be erected, was laid with appropriate ceremonies October 25.

**Pathologic Laboratory Installed.**—The new division of bacteriology and pathology of the State Library of Hygiene, established for the purpose of disease prevention and treatment, will be in operation November 1 under the charge of Dr. T. Victor Keene, city sanatorian of Indianapolis.

**District Society Meeting.**—The Thirteenth Councilor District Medical Society held its annual meeting at Elkhart October 19, at which Dr. Charles C. Terry, South Bend, was elected president; Dr. John M. Ward, Kewanna, vice-president, and Dr. John C. Fleming, Elkhart, secretary and treasurer. The next meeting will be held in South Bend in March, 1906.

**Would Avoid Even Appearance of Evil.**—The Clay County Medical Society has adopted a resolution agreeing to call the attention of the reading public to the fact that it is nonethical and beneath the dignity of a scientific profession for physicians to allow their names to be published in connection with local notices of sickness, accidents or surgical operation.

**Personal.**—Dr. and Mrs. Jonah M. Bye, Indianapolis, are going to Mexico for the winter.——Dr. Reuben E. Brokaw has been elected secretary, and Dr. William P. Schwartz, treasurer,

of the Portland City Hospital.——Dr. George C. Mason has succeeded Dr. W. I. West as a member of the school board of Oakland City.——Dr. Lewis C. McFatridge, Atlanta, and daughter, have gone to California.——Dr. John M. Pulliam, assistant physician at Longcliff Hospital for the Insane, Logansport, has resigned and will practice in Fort Wayne.——Dr. Kent K. Wheelock, Fort Wayne, has been chosen as a member of the faculty of the medical department of Purdue University.

## KANSAS.

**Diphtheria Closes School.**—School District No. 51, south of Richland, has been closed on account of the prevalence of diphtheria.

**Sentence Commuted.**—Dr. Samuel B. S. Wilson, Olathe, who was sentenced to eight months' imprisonment for violating the prohibitory law of the state, has had his sentence commuted by the governor on consideration that the fine and costs be paid.

**Practiced Without License.**—In the case of "Dr." Renshaw, Pittsburg, charged with practicing medicine without a state license, the defendant was released on his own recognizances, on his promise to procure the money necessary to pay the costs, and his agreement to leave town.

**Infectious Diseases.**—During September 91 cases of tuberculosis were reported to the State Board of Health and 62 deaths; 294 cases of typhoid fever, with 51 deaths; 224 cases of diphtheria, with 11 deaths; 106 cases of scarlet fever, with no deaths; 58 cases of smallpox, with 1 death, and 72 cases of dysentery, with 18 deaths.

**South Kansas Society Election.**—At the annual sessions of the South Kansas Medical Society, held at Wichita, October 17-18, the following officers were elected: Dr. John D. Clark, Wichita, president; Drs. Richard H. Haury, Mound Ridge, and William H. Smethers, Moline, vice-presidents; Dr. George K. Purvis, Wichita, secretary, and Dr. Fred S. Brown, Wichita, treasurer.

**Personal.**—Dr. John Morgan, Iola, has resigned as health officer of Allen County, and Dr. Robert O. Christian, Iola, has been appointed to fill the vacancy. Dr. Morgan has moved to Neosho Falls.——Dr. William G. Muir, mayor of Harper, was shot by a cowboy who was "shooting up the town" October 9, but was not seriously injured.——Dr. Oliver C. McNary, National Military Home, assistant surgeon of the Soldiers' Home, has been appointed chief surgeon of the Pacific branch of the National Home for Disabled Volunteer Soldiers, Santa Monica, Cal.

## KENTUCKY.

**Changes in Medical Faculty.**—As the result of the vacancy caused by the death of Dr. John A. Ouchterlony the following changes have been made in the faculty of the department of medicine of the University of Louisville: Dr. John G. Cecil was made professor of the practice of medicine, Dr. Henry A. Cottell was given the chair of materia medica, and Dr. Edward R. Palmer was assigned to the chair of physiology.

**Personal.**—Dr. Joseph Barr, Lebanon, has assumed the position of physician at the state penitentiary, Frankfort, made vacant by the death of Dr. Hugh L. Tobin.——Dr. F. P. Thomas, Hopkinsville, has been suffering from an infected wound of the finger.——Dr. H. W. Watts, Long View, has been adjudged of unsound mind and has been committed to the Western Kentucky Asylum for the Insane, Hopkinsville, for treatment.——Dr. William Sanders, Louisville, has been made lecturer on the practice of medicine in the Kentucky School of Medicine.

## LOUISIANA.

**As a Dangerous Character.**—Joseph Albert, self-styled "oriental professor," industrial mechanic and chronic disease curer, was fined $25 for practicing medicine without a license and was sent to the Orleans parish prison, New Orleans, as a dangerous and suspicious character, October 14.

**Entrance Not Graduation.**—Dr. Felix A. Larue, New Orleans, requests us to correct a news note which stated that he recently visited his alma mater at Emmittsburg, Md., to celebrate the silver jubilee of his graduation. Dr. Larue entered the institution in 1880 and the jubilee was of his entrance to St. Mary's College.

**Personal.**—Dr. Joseph Darracott, Shreveport, has resigned his position in the Shreveport Sanatorium and has accepted a position in the Cotton Belt Railway Hospital, Texarkana, Ark.——Dr. Norwood K. Vance, assistant health officer of Shreveport, has resigned.——Dr. Thomas Y. Aby, assistant quarantine officer at Quarantine, at the mouth of the Mississippi, has resigned owing to advancing years and ill health.——Dr. and Mrs. Joseph S. Hebert, New Orleans, have returned from a two months' stay in the North and East.

## MAINE.

**Smallpox.**—East Machias reports that at the close of the week ended October 14 there were 7 cases of smallpox of mild type in the town.

**Golden Wedding.**—Dr. and Mrs. James M. Bates, Yarmouth, celebrated the fiftieth anniversary of their wedding October 11.

**Hospital News.**—The new North Arostook General Hospital at Eagle Lake Mills is almost completed.——The contract for the enlargement of the Chipman Memorial Hospital, Calais, has been let and work will begin at once. The estimated cost of the addition is $6,000.——Webber Hospital Association, Biddeford, formed several years ago to erect a hospital in that city, has been offered a tract of land as a site for the institution.

**Suicides.**—Dr. A. G. Young, registrar of vital statistics, reports that during the past year 77 persons committed suicide in the state, 27 more than last year. Of that number 60 were males and 17 females. Of those who committed suicide 21 hung themselves, 21 died from gunshot wounds, 15 were drowned, 13 took poison, 4 cut their throats, 2 jumped from high places and 1 died from asphyxiation.

**Personal.**—Dr. Albion G. Young, Augusta, secretary of the State Board of Health, and wife, have gone to the Pacific Coast.——Hugh F. Quinn, a senior student in the Medical School of Maine, Brunswick, has been appointed a state bacteriologist.——Dr. Daniel W. Wentworth, Sanford, who has been ill with rheumatic fever, is improving.——Dr. John F. Stevens, Millinocket, has been appointed a member of the local board of health.——Dr. Harvey L. Jewell, Bangor, after a long illness with sciatica, has assumed practice.——Dr. Sarah L. Hunter, Machias, has taken a trip to the Pacific Coast.——Dr. and Mrs. Frederick Thayer, Waterville, have gone to Mexico.——Dr. and Mrs. Ralph W. Bucknam, Portland, returned to California October 20.

## MARYLAND.

**The Mosquito Question.**—A public meeting on the mosquito question was held at the Johns Hopkins University, Baltimore, November 1, at which Prof. John B. Smith, state entomologist of New Jersey, delivered an illustrated lecture.

**Recovery from Anthrax.**—Dr. Arthur D. Mansfield of Owings' Mills has just recovered from a severe attack of anthrax supposed to have been contracted in Kent County August 17 from an abrasion on his neck caused by the rubbing of his collar, which became infected by contact with some straw on which an infected animal had been lying. He underwent fifteen operations.

**Society Election.**—The Worcester County Medical Society held its annual meeting at Snow Hill October 24. It was organized two years ago by Dr. William S. Thayer of Baltimore, and embraces in its membership 18 of the 24 physicians in the county. Six were added at the meeting. The following officers were elected: President, Dr. John S. Aydelotti, Snow Hill; vice-president, Dr. Edwin J. Dirickson, Berlin; secretary, Dr. R. Lee Hall; treasurer and delegate to the State Society, Dr. Paul Jones, Snow Hill, and attorney, Mr. Robley D. Jones.

**Personal.**—Dr. Lewellys F. Barker delivered an address before the Library and Historical Society of the University of Maryland, Baltimore, October 26, on "The Ordering of Life." Dr. Barker has been elected president of the Medical Journal Club.——At the annual meeting of the Society of the War of 1812 Dr. James D. Iglehart was elected vice-president, and Drs. Charles E. Sadtler and Nicholas L. Daspiell were elected members of the executive committee, all of Baltimore.——Dr. John T. O'Mara, resident physician to St. Agnes' Hospital, Baltimore, resigned November 1.——Dr. Montgomery Higgins, Boyds, has gone to Panama under assignment by the government on the medical staff.

## MASSACHUSETTS.

**Diphtheria Closes School.**—The South Street school, Ware, has been ordered closed for two weeks on account of the prevalence of diphtheria.

**The Leper Home.**—The State Board of Charities has officially visited the State Leprosarium on Penikes Island, of which Dr. Louis Edmonds, Harwich, was recently appointed superintendent.

**Wins Suit from Railroad Company.**—In the case of Dr. John A. Fitzhugh, Amesbury, vs. the Boston & Maine Railroad, in

which the plaintiff claimed damages of $1,250 for himself and of $300 for loss of horse, damage to carriage, etc., the jury found for the plaintiff.

**Hospital Notes.**—Mrs. Henry Haywood and Miss Helen R. Haywood will erect a hospital at Gardner to the memory of the late Herman Haywood, and will in addition give a sufficient endowment for its maintenance.——Marlboro Hospital will receive $501 as the result of the field day September 16.

**Pleads Guilty.**—Mrs. Annie Brown, who pleaded guilty to having been an accessory before the act at a criminal operation on Mrs. Elsie Allen, Winthrop, was found guilty October 18 and sentenced to imprisonment in the Women's Reformatory at Sherburn, for five years and three months.

**Thurber Society Election.**—At the fifty-second annual meeting of the Thurber Medical Society, held at Milford October 12, Dr. Nathan W. Sanborn, Belingham, was elected president; Dr. Osman C. B. Nason, Medway, vice-president; Dr. Ambrose J. Gallison, Franklin, secretary; Dr. Charles B. Hussey, Franklin, treasurer; Dr. Christopher D. Albro, Milford, librarian; Dr. Wilfred W. Browne, Blackstone, orator, and Dr. E. L. Hill, Millis, alternate.

**Personal.**—Dr. John H. Lindsey, Fall River, has reconsidered his resignation as a member of the staff of the City Hospital.——Dr. Charles Harrington, Boston, secretary of the State Board of Health, has gone to Europe, and Dr. George P. McGrath, his assistant, is attending to the duties of the office.——Dr. Alfred I. Noble, Worcester, has been elected superintendent of the Michigan Asylum for the Insane, Kalamzaoo, to succeed the late Dr. William R. Edwards.——Dr. Edgar Dwight Hill, Plymouth, has been appointed a member of the board of trustees of the Medfield Insane Hospital.

## MICHIGAN.

**Personal.**—Dr. Iman Wisse, Grand Rapids, has been ordained as a minister of the Congregational church.——Dr. Austin O'Leary has been appointed assistant at the Sorsen Private Hospital, Laurium.——Dr. William J. Robinson has been appointed city physician of Lapeer.

**Diphtheria.**—Menominee is alarmed at the present outbreak of diphtheria in the city.——In Washington Island business is practically at a standstill from the general quarantine, and several deaths have been reported.——In Grand Rapids 30 cases have been reported in two days and the Congress Street school has been closed pending fumigation.——Schools have been closed indefinitely at Camden and all exposed people have been quarantined on account of the prevalence of the disease.

**State Board of Health.**—At the meeting of the State Board of Health in Lansing October 13, the board ordered printed a new and amended edition of 20,000 copies of "The Dangerous Communicable Diseases, How Restricted and How Spread"; the secretary was instructed to revise certain of the publications of the board and to prepare the same in the form of a manual for the use of local health officers, and a new edition of 2,000 copies of the amended pamphlet on "Embalming and the Removal and Transportation of Dead Bodies" was ordered printed.

**Opposed to Contract System.**—At the annual meeting of the Pontiac Medical Society October 17 the following resolutions were adopted regarding contract and lodge practice:

WHEREAS, In recent years there have been frequent calls on the members of our society to render medical and surgical services to individual members of orders, lodges or societies at contract prices; and,

WHEREAS, Some of our members have been prevailed on to render an indefinite amount of service for a definite fee: therefore,

*Resolved*, That the Pontiac Medical Society hereby places itself on record as opposed to the lodge or contract system, so called.

*Resolved*, That the executive committee of this society be asked to present at our next meeting some of the more cogent arguments for such action in the form of a circular letter, which may be sent to each of our members.

The following officers were elected: President, Dr. Nathan B. Colvin; vice-president, Dr. George H. Drake; secretary, Dr. Carlton D. Morris, and treasurer, Dr. James J. Murphy.

## MINNESOTA.

**Personal.**—Dr. Emil C. Robitshek, Minneapolis, has returned from abroad.——Dr. John M. White, LeRoy, has been appointed assistant physician at the St. Peter State Hospital for the Insane, vice Dr. Charles E. Burleson, resigned.

**Death Prevents Trial.**—The indictment against Arthur Klementz, St. Paul, charged with practicing medicine without a license, was stricken from the docket October 17, as the defendant had died since the indictment was turned in.

**Defer Bequests.**—The board of regents of the University has asked that the $150,000 bequest for the Elliot Memorial Hospital on the college campus be deferred until the legislature can approve the gift and make provision for the maintenance of the institution.

**Hospital Fire.**—St. Raphael's Hospital, St. Cloud, was destroyed by fire, which started near an elevator shaft, October 10. Fifty-three patients and 16 sisters of the Order of St. Benedict were removed in safety. The loss is estimated at $60,000, with an insurance of $33,000.

**Brown-Redwood County Medical Society.**—At the annual meeting of this society September 12, Dr. James L. Adams, Morgan, was elected president; Dr. Jacob W. B. Wellcome, Sleepy Eye, vice-president; Dr. W. A. Brand, Redwood Falls, secretary, and Dr. Christopher P. Gibson, Redwood Falls, censor.

**Grave Charges.**—Dr. H. M. Bracken, secretary of the State Board of Health, charges that the city health office of Minneapolis has directly violated the state laws relative to the inspection and licensing of maternity hospitals. He stated that the records of the State Board of Health show only one duly licensed maternity hospital in Minneapolis, and that he was unable to find records of any inspections during the last two years.

**Must Report Accidents.**—In accordance with a measure enacted by the legislature, physicians are required to report to the registrars of deeds of their respective counties all accidents which come under their care, providing the patients are incapacitated from pursuing their usual vocations for a period of at least two weeks. Any failure to make such reports on the part of physicians renders them liable to a fine of $100 or imprisonment of six months.

**Hospital News.**—At a meeting of the directors of the City and County Hospital Association, Albert Lea, September 22, it was decided to lease the Wilcox Hospital and to take charge of it as soon as possible.——The Norwegians of the Northwest have united and will erect a $200,000 hospital in Minneapolis, to be known as the United Norwegian Lutheran Hospital. Drs. Knut Hoegh and Alfred N. Bessesen are members of the board of trustees. Dr. Henry Nissen has given $1,000 toward the building fund.——The new hospital at Luverne was formally opened October 16. The building has been erected by Dr. A. E. Spalding at a cost of $10,000, and is well built and thoroughly equipped.——Drs. Helen and Jane C. Hughes, Mankato, have remodeled and equipped a building as a maternity hospital, which was opened October 16. The institution has accommodations for 15 patients.

## MISSOURI.

**Academy Wants to Build.**—The Kansas City Academy of Medicine, at a meeting October 9, decided to purchase land and build a clubhouse at a cost of $30,000.

**Quarantine Hospital.**—The House of Delegates has passed a bill appropriating $75,000 for the construction of a hospital at quarantine, south of St. Louis.

**Sanatorium Located.**—Chigger Hill, north of Mount Vernon, has been selected as the site for the State Sanatorium for the Treatment of Tuberculosis. The site comprises 190 acres and is well adapted for the purpose.

**Hospital News.**—On October 18 the new St. Mary's Hospital, Jefferson City, was dedicated with appropriate ceremonies. The building will accommodate about 60 patients and has cost nearly $100,000.——The receipt of a check for $2,500 insures to Carthage a hospital to cost $25,000.

**Schedule of Clinics.**—The schedule of clinics for the medical college season at the City Hospital is as follows: Monday and Saturday are given to the eclectic and homeopathic schools respectively; Tuesday to the College of Physicians and Surgeons; Wednesday to the Washington University; Thursdays to Barnes Medical College, and Friday to the Marion-Sims Medical College.

**Southwestern Doctors Meet.**—The John T. Hodgen Medical Society, embracing the counties of Cass, Bates, Vernon and Barton, held its annual meeting in Nevada October 5. The following officers were elected: Dr. McCord G. Roberts, Lamar, president; Drs. Theodrick C. Boulware, Butler, and M. P. Overholzer, Harrisonville, vice-presidents, and Dr. Thomas F. Lockwood, Butler, secretary and treasurer. The next meeting will be held in Lamar.

**Personal.**—Drs. S. B. Wells and Joseph E. Dibble, Kansas City, have been appointed official vaccinating physicians.——Dr. Moritz F. Weymann, St. Joseph, was committed to State

Hospital for the Insane No. 2, St. Joseph, September 30.——Dr. Avis E. Smith, Kansas City, was given the degree of M.A. at the recent convocation of the University of Illinois.——Dr. Mary H. McLean, St. Louis, has returned from a trip to the Orient.——Dr. George B. Thompson, Kansas City, is in a serious condition from an accident received a month ago on the Leavenworth electric line.

## MONTANA.

**Charge Dismissed.**—The charge against H. De Pew, Anaconda, of practicing medicine without a license, has been dismissed on motion of the assistant county attorney.

**Practiced Without License.**—A. R. Lucas, Bozeman, charged with practicing medicine without a certificate from the State Board of Examiners, was found guilty October 11 and was fined $100 and costs, a total of $170.80.

**Hospital Notes.**—A hospital has been opened in Red Lodge by Dr. Samuel M. Souders.——The Murray-Freund Hospital, Butte City, will be known hereafter as Murray's Hospital and will be under the direct supervision of Dr. Thomas J. Murray.

**Personal.**—Dr. Dan J. Donohue, Glendive, has been commissioned captain in the Second Infantry, Montana National Guard.——Dr. Havelock H. Hanson, Butte, was thrown from his buggy in a runaway accident and sustained a bad fracture of the left arm below the shoulder and an injury to the left knee.——Dr. Malcolm G. MacNevin and family, Butte, have gone to Europe.

## NEBRASKA.

**Colleges Opened.**—The University of Nebraska College of Medicine, Omaha, opened September 28.——The Creighton Medical College, Omaha, was opened September 30.

**Fever at Insane Hospital.**—The Nebraska Hospital for the Insane at Lincoln is suffering from a serious epidemic of typhoid fever; 19 cases have already appeared.

**Personal.**—Dr. Ernest J. C. Sward, Oakland, has succeeded Dr. Andrew B. Summers, Omaha, as secretary of the State Board of Health.——Dr. Samuel K. Spalding, Omaha, has been elected health inspector.——Dr. Edwin Oxford, Omaha, has been made assistant physician of the Latter Day Saints' Hospital, Salt Lake City.

**Attack Legality of State Medical Board.**—The attorneys for Drs. Erick Munck and D. G. Walker, Platte County, whose medical certificates were revoked several months ago by the State Board of Health, have filed briefs in the Supreme Court in which they question the legality of the statute providing for the establishment of that body. It is charged that the statute is violative of the constitutional provision that requires all fees of office to be paid in the state treasury.

## NEW HAMPSHIRE.

**Bequest.**—By the will of Mrs. Edward C. Thayer, Keene, $10,000 is devised to the New England Hospital for Women and Children, Boston.

**Fire in Sanatorium.**—The North Elm Street residence of Dr. Noel E. Guillet, Manchester, was destroyed by fire September 10, with a loss of $3,500, entirely covered by insurance.

**Would Force Contract Practice on Physicians.**—At a convention of delegates representing fraternal benefit societies of Nashua resolutions were adopted protesting against the action of the Nashua Medical Society in agreeing to refuse to enter into any contract with fraternal societies or to hold consultations with contract physicians of such fraternal societies.

**Hospital News.**—Rev. Jeremiah S. Jewett, Warren, has offered $5,000 worth of real estate as a site for a hospital for Laconia. When $10,000 has been secured a bequest made by Rhoda Ladd will be available.——A friend of Dr. William J. W. Beattie, Littleton, who does not wish his name made public, has offered $5,000 toward the erection of a hospital in that town and $1,000 a year for the next five years, provided the town of Littleton will support the project.

## NEW YORK.

**Gift Fair Open.**—The German Hospital gift fair opened at City Convention Hall, Buffalo, October 30, to continue for one week. It promises to be the largest fair for a public charity ever conducted in Buffalo and a huge financial success is to be expected.

**Personal.**—Dr. Robert A. Taylor, Otisville, has been appointed surgeon by the contractors in charge of constructing the Erie tunnel at that place and a hospital equipment has been installed in his home.——Dr. Robert Abbe, New York City, has been elected president of the Associate Alumni of the College of the City of New York.——Dr. James E. King has been elected a member of the staff of the Buffalo General Hospital, and Dr. Regina F. Keyes has been appointed an assistant on the gynecologic service.——Dr. Max Breuer has returned from several months in Europe.

**Central Medical Society.**—The Medical Association of Central New York held its annual meeting at Buffalo, October 24. The following officers were elected: President, Dr. David M. Totman, Syracuse; vice-presidents, Drs. William B. Jones, Rochester, and Lemuel L. Tozier, Batavia; secretary, Dr. Clarence A. Greenleaf, Rochester, and treasurer, Dr. William M. Brown, Rochester. The meeting was held in the Historical Society building at Buffalo and was presided over by Dr. Charles G. Stockton. At the close of the meeting the members were entertained by a supper and smoker at the Buffalo Club.

### New York City.

**To Build Hospital Pavilions.**—The commissioner of charities has filed plans for seven emergency hospitals to be erected on Blackwell's Island. They are to be 20 feet front and 100 feet deep and will each have 28 beds. The cost of the group is estimated at $17,150.

**Tuberculosis Hospital Assured.**—The board of estimate has appropriated $800,000 toward the construction of the proposed tuberculosis hospital on Staten Island, and has bound itself by resolution to appropriate the balance of the $2,000,000 needed to carry out the plans in detail.

**Panic in City Hospital.**—Fire destroyed a small frame structure on Blackwell's Island adjacent to the City Hospital. This precipitated a panic among the inmates of the Almshouse and City Hospital, which for a time threatened to be serious, and required all the efforts of physicians, nurses and attendants to allay.

**The Williamsburg Hospital.**—This institution has added to its staff Dr. Glentworth R. Butler, Brooklyn. The service of the hospital has become so large that at a recent meeting of the board of directors it was stated that negotiations were under way to purchase the adjoining property to make room for the increased service.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended October 21, 326 cases of tuberculosis, with 151 deaths; 218 cases of diphtheria, with 28 deaths; 113 cases of measles, with 2 deaths; 99 cases of typhoid fever, with 17 deaths; 75 cases of scarlet fever, with 6 deaths, and 10 cases of cerebrospinal meningitis, with 8 deaths.

**Smallpox at Ellis Island.**—An immigrant taken from the *Nord Amerika* with a well developed case of smallpox is in the Kingston Avenue Hospital for Contagious Diseases, Brooklyn. The passengers who occupied the same compartment with him, 59 in number, are at Ellis Island awaiting developments. The ship had passed quarantine before the case was discovered.

**Water Plan Approved.**—The board of estimate and apportionment has approved the report of the board of water supply, providing for the outlay of $161,000,000 for tapping the Catskill Mountains and bringing to the city 660,000,000 gallons of water daily in addition to the present supply. This will give a supply sufficient for all purposes for the next twenty years.

**Sterilized Milk Urged.**—Mr. Nathan Strauss of this city read a paper before the Milk Congress of Paris as to the need of pasteurizing the entire milk supply of cities. Dr. Harvey W. Wiley, chief of the bureau of chemistry, has given his unqualified indorsement to Mr. Strauss' suggestion that the pasteurizing of milk should be made a municipal function and that it is quite as important that pure milk should be furnished to cities as that they should have pure water.

**New Hospital Ready.**—The Philanthropic Hospital which was recently chartered by the State Board of Charities, was dedicated October 29. The temporary building is located at the corner of Briggs Avenue and Maple Street, Williamsbridge, and the permanent hospital will be in the immediate vicinity. A training school for nurses will be maintained at the hospital, and an ambulance service will be established in a short time. Louis Mann organized a concert a short time ago for the benefit of this institution which netted $1,000.

## OKLAHOMA.

**Diphtheria.**—The public schools at Blackwell and Perry have been closed on account of the prevalence of diphtheria, and at Blackwell church services have been discontinued for the same reason.

**Personal.**—Dr. G. F. Border, Mangum, who was in charge of the Emergency Hospital at Snyder after the tornado last May, was presented with a handsome medal for his services in that

emergency.——Drs. H. Coulter Todd and Ulbus L. Russell, Oklahoma City, are studying in London.

**Medical College Opens.**—The medical department of Epworth University opened for its second annual session October 12. Only the first two years of a medical course have thus far been taught, but with increased hospital facilities the school will open for a full four years' course in 1906.

**Oklahoma City and Not Guthrie Hospital Closed.**—The superintendent of the Guthrie Hospital requests us to state that that hospital has not closed, but is enjoying a very flattering success. The hospital which closed owing to disagreement of the staff regarding its management was the Oklahoma City Hospital, Oklahoma City.

## PENNSYLVANIA.

**Personal.**—Dr. Horatio C. Wood was guest of honor at the annual meeting of the Pittsburg Alumni Association of the University of Pennsylvania, October 20.

**Typhoid at Nanticoke.**—The number of cases of typhoid fever reported at Nanticoke thus far is nearly 400, and the total number of deaths reported thus far is more than 40.

### Philadelphia.

**Dr. McCracken to Go to China.**—At the recent meeting of the board of directors of the Christian Association of the University of Pennsylvania it was resolved to send Dr. Josiah C. McCracken to China for a period of one year in order to study the situation on the field and arrange details of establishment of the proposed medical school in Canton.

**Personal.**—Dr. Charles B. Penrose has resigned from the advisory board of the Department of Health and Charities. ——Dr. Thomas W. Jackson, U. S. A., will deliver a series of lectures on tropical medicine in the Jefferson Medical College during the term.——Dr. and Mrs. Walter Lindley of Los Angeles, Cal., visited this city during the week and were entertained at dinner by Dr. E. E. Montgomery, October 30. Dr. Lindley is dean of the Medical College of Southern California and editor of the *Southern California Practitioner*.

**Health Report.**—The deaths reported from all causes during the week numbered 410. This is an increase of 12 over last week, and an increase of 3 over the corresponding period of last year. The principal causes of death were: Typhoid fever, 5; diphtheria, 14; tuberculosis, 52; cancer, 16; diabetes, 6; apoplexy, 24; tetanus, 1; heart disease, 44; acute respiratory diseases, 33; enteritis (under 2 years), 25; enteritis (over 2 years), 6; Bright's disease, 38; suicide, 2, and accidents, 22. There were 200 cases of contagious disease reported, with 22 deaths, as compared with 212 cases and 16 deaths during the preceding week.

**Food Adulterators Imprisoned.**—The cases known as the "Navy Yard food cases" were tried in court October 26. The defendants were charged with furnishing oleomargarine to the men at the Navy Yard instead of butter. Two firms were found guilty and sentenced to sixty days in jail, to pay a fine of $250 each, and ordered to pay the cost of the prosecution. At the same time Fred M. Hall, the manager of Swift & Co., beef dealers, paid a fine of $100 for selling to the Navy Yard sausages preserved with boric acid. He was also ordered to pay the costs, not only of court, but also of the test which proved the presence of the adulterant in the sausage. An estimate of these costs by an attaché of the dairy and food commissioner's office placed them as high as $1,000.

## GENERAL.

**Dr. Herzog Studies Beriberi.**—Dr. Maximilian Herzog, who for the last two years has been connected with the government laboratories of Manila, has been studying beriberi in the military hospitals of Japan for the past three months, by order of the government of the Philippines.

**Removal of Quarantine Against the Isthmus.**—The quarantine which the island of Jamaica has maintained against Colon during the past six months has been removed, and the Royal Mail Line of steamships is now permitted to take passengers to Jamaican ports. *Public Health Reports* states that large numbers of Jamaican negroes have been waiting for this opportunity to return to their homes in Jamaica, and the removal of this quarantine will be a considerable relief to the Isthmus.

**The Title of Surgeon-General.**—It is reported from Washington that Dr. O'Reilly, surgeon-general of the Army, has called attention to the fact that the respective heads of the Navy Department and of the Public Health and Marine-Hospital Service bear the same title of surgeon-general, alleging that in time of war it might cause dire confusion. As the head of the Army Department has borne the title longest, Dr. O'Reilly thinks that the heads of the other departments should be designated in some other way.

**Health Report of the Philippines.**—The report of the Board of Health of the Philippine Islands states that during June, 1905, there were 583 births in the city of Manila, 295 males and 288 females. During the month there were 627 deaths, of which 593 were of residents and 34 transients. Gastroenteric diseases were especially prevalent among children under 2 years, 84 deaths being caused by gastroenteritis and diarrhea among children of that age. There were 7 cases of bubonic plague, with 6 deaths, and 3 cases of smallpox, with 1 death.

**Yellow Fever News.**—During the week New Orleans has had a day when no new cases were reported, while the new cases at Pensacola have exceeded those at New Orleans. President Roosevelt has been at New Orleans, where enormous crowds gathered, but as the fever was practically extinct there was little or no danger to anyone.——Failure of citizens and physicians at Pensacola to report cases having practically nullified the efforts to exterminate the infection, drastic action was taken. Dr. L. C. Phillips and Dr. James S. Herron of Pensacola were arrested for failure to comply with the notification ordinance.——Chattanooga, Tenn., abolished its quarantine on October 26.——The northern part of Alabama has been freed from quarantine. At Castleberry, in southern Alabama, there have been two cases of fever whose origin thus far has not been discovered.——The Arkansas quarantine has been abolished except as to two counties on the Louisiana border. ——Texas raised its quarantine as to the uninfected parts of Louisiana and Mississippi.——On October 25 only 5 cases of yellow fever were known to exist in the republic of Mexico. It is hoped that next year will pass without any case.——As a result of the late calamity, New Orleans will have a permanent emergency hospital and a permanent sanitary organization. Unofficially it is announced that there will be a considerable surplus left of the fund raised ($250,000) to fight the fever. This balance will be used for the permanent emergency hospital.——A freak of the epidemic is the estimate made by certain newspapers that the arsenic craze led to the sale and self-administration of 3,000,000,000 tablets—about 6 tons.—— Surgeon White, United States Public Health and Marine-Hospital Service, who conducted the winning campaign at New Orleans among compliments and the thanks of citizens, is the victim of a mal apropos incident. On John H. Whyte, a reporter on the staff of the *Daily States*, has sued Surgeon White for $10,000 damages. Early in the epidemic the correspondent used his name in such a way as to have it confused with the officer's. Dr. White promptly explained the true state of affairs, and his remarks are made the basis of the suit. ——The coming Chattanooga conference on quarantine, a direct result of this season's epidemic, will, it is said, mark a long step toward better conditions.

## CANADA.

**Trachoma in Canada.**—In 1901 the American authorities instituted surveillance over emigrants arriving by way of Canada and turned back those presenting evidences of trachoma. This led to the accumulation of a number of cases in Canada, and, for the first time, the attention of the Canadian government was attracted to the subject of trachoma. In 1902 the regulation was adopted excluding from the country the emigrants with severe cases of the affection, while those with the apparently curable form were taken into the Canadian hospitals and discharged when cured. In 1904 detention hospitals were organized at Quebec and placed in charge of Dr. P. H. Bryce, and here all the emigrants with signs of trachoma are sent for treatment and final judgment on their case. During the year about 800 emigrants were sent to these hospitals and 300 were sent back to the country whence they had emigrated. In 1905 about 1,000 persons have already been sent to the detention hospitals. This large number is due to the increased immigration, and also to the fact that one ship had 330 passengers affected with trachoma from accidental contagion during the nineteen days' voyage. Most of these persons were released after two or three weeks. The steamship companies are beginning to realize that it is to their interest not to bring over trachoma subjects, and during the last few months not a case has been found among the emigrants. The Quebec hospitals also report very few cases under observation during the last year or so, but physicians in the Northwest write that they seem to have an unduly large proportion of trachomatous patients. They are probably old cases, in emigrants who entered the country before the present regulations were enacted. The difficulty of differentiating incipient trachoma from ordinary conjunctivitis renders the question one of the

most puzzling that a physician is called on to decide.—From article by J. D. Page, of Quebec, in *Bull. Med. de Québec*, for September.

## FOREIGN.

**Plague in the Argentine Republic.**—It is reported from Buenos Ayres that in the beginning of October there was a recrudescence of plague in Choya.

**A Medical Hotel at Rome.**—The *Riforma Medica* states that a medical hotel or sanatorium is to be constructed at Rome, equipped according to the most modern ideas of comfort and medical care and attendance.

**Medical Social Club at Rio de Janeiro.**—A club for social and benevolent purposes has been organized at Rio de Janeiro, the membership being restricted to physicians. The club meets at present in the rooms of the Academy of Medicine. There are 300 members.

**Typhoid in Great Britain.**—The health officer from Stoke-on-Trent has reported an outbreak of typhoid fever at Trent Vale, which he attributes to the water supply. Bacteriologic examination has shown that a certain well is polluted with sewage to a dangerous extent.

**Asiatic Cholera on a British Vessel at Suez.**—The steamship *City of Manchester* arrived at Suez from India with one case of cholera on board. The patient, a Hindoo sailor, was landed at the quarantine station, where a bacteriologic examination confirmed the diagnosis. The patient died.

**Circular for Workers in Lead.**—The German board of health has issued a circular to be distributed to painters and other workers in lead, informing them of the way in which lead poisoning occurs, and means to prevent it. The circular is worded in a concise, popular style and is given free to all interested in the subject, and can be purchased at the news stands.

**Yellow Fever in Central America.**—Minister Coombs reports from Guatemala City that the epidemic of yellow fever which has been present on the north coast of Guatemala and as far inland as Zacapa and Gualan, has apparently run its course and that conditions are greatly improved. The government has maintained a military quarantine around the infected region.

**Medals Awarded by the Tuberculosis Congress.**—The recipients of the medals are Drs. Robert Koch and P. Brouardel, Bang of Copenhagen, Biggs of New York, Broadbent of London and von Schroetter of Vienna. In our mention of the award last week we included the name of Dr. Billings of New York on very reliable authority, but later reports omit his name and give that of Dr. Herman M. Biggs.

**Society for the Prevention of Tuberculosis.**—It is reported that a society is being formed in Chester for the prevention and cure of consumption. The object of the association is to furnish gratuitous treatment to the poor. Patients will be received and examined and special attention will be given to children. The danger from sputum will be explained, as well as the value of fresh air in promoting recovery.

**Proposed National Memorial to Dr. Barnardo.**—Appeals are being published in England for the endowment of a fund of a million and a quarter dollars as a national memorial to the late Dr. Barnardo to insure the maintenance of the Barnardo homes for waifs. The appeal states that the number of children rescued, trained and placed out in life by these homes now amounts to 55,962. The work is going on the same since the death of the founder.

**Hospitals in Cambogia, Indo-China.**—The French resident in Cambogia is organizing a hospital service for that country. The French correspondent of the *British Medical Journal* states that some months ago it was decided to build a native hospital and maternity, and it is expected that the first block will soon be completed. The king, who realizes the benefits to the people of the proposed innovations, has expressed his willingness to defray part of the expense.

**Experimental Research on Tuberculosis Infection.**—The *Riforma Medica* for September 23 states that Fatta and Cosco have been conducting research at Rome under the auspices of the local board of health to decide whether man can be affected with tuberculosis from animals and *vice versa*. After long, careful experimental work they announce their conclusions to the effect that sputum from persons affected with pulmonary tuberculosis is incapable of infecting tuberculous cattle.

**Physicians Elected to Spanish Senate.**—The last *Siglo Medico* brings word that ten physicians were elected senators during the election just held. Taboada was appointed a senator for life by the government; Calleja is another physician who has long been a life member of the senate. The National Academy of Medicine has also the right of electing a senator, this year its choice falling on the professor of pharmacy, G. Pamo. Three pharmacists are also members of the lower house.

**Fourth International Congress of Medical Examiners for Life Insurance.**—The program for this meeting, which convenes at Berlin, Sept. 11-15, 1906, has already been given out. The five subjects to be discussed are: "Early Determination of a Tendency to Tuberculosis, Especially of the Lungs," "Obesity in Its Relation to Life Insurance," "Influence of Syphilis on Length of Life," "The Vaccination Clause in the Insurance Contract," and "Influencing of Internal Affections by Accidents."

**Honors for the Editor of the "Riforma Medica".**—Prof. G. Rummo of Palermo is the publisher and editor of the *Riforma Medica*, now in its twenty-second year. He has been professor of clinical medicine at Palermo, on the island of Sicily, in Italy, for about ten years, but has recently accepted a call to Naples to take charge of the new medical clinic. His friends in Sicily presented him with a gold medal before he left. Subscriptions were received from all parts of the island from former patients and friends as well as from members of the medical profession.

**Themes to be Discussed at the Next International Surgical Congress.**—The next reunion of the International Association of Surgeons will be held again at Brussels, where the central office of the association is located. Czerny of Heidelberg will preside, and five subjects have been appointed for discussion. No communications are admitted to these congresses except those bearing on the subjects previously announced. These are: Cancer, surgery of the liver, anesthesia, spine and hernias. Our foreign exchanges have given full reports of the proceedings of the recent congress, of which a brief description was given in THE JOURNAL, on page 1180.

**Seventh Australasian Medical Congress.**—The seventh session of the Australasian Medical Congress was held at Adelaide the beginning of September. The inaugural address was delivered by Professor Stirling of the University of Adelaide; the address in pathology by Professor Welch of the University of Sydney; the address in surgery by Dr. F. D. Bird of Melbourne; the address in medicine by Dr. Colquhoun of Dunedin; the address in gynecology by Dr. W. S. Bryne of Brisbane, and the address on public health by Dr. W. G. Armstrong, medical officer of health for Sydney. Dr. H. B. Allen, professor of pathology in the University of Melbourne, is the president-elect.

**Anniversary Number of the Havana Revista de Medicina y Cirugia.**—The *Revista* celebrates the tenth anniversary of its foundation by a special souvenir number of 130 pages, profusely illustrated. It contains data and illustrations of the various medical institutions of Cuba, besides a number of articles by prominent physicians on the medical profession in Havana, the evolution of surgery in Cuba, medical instruction and medical organization in the island, and an article from Juan Santos Fernandez describing the rise of medical journalism in Cuba. Dr. N. G. Gutierrez was the founder of the medical press in Cuba, and also of the Academy of Sciences. His first medical journal was launched in 1840, and since then Cuba has had a large number of medical periodicals, many of them flourishing to-day.

**Sanitation in Rio de Janeiro.**—The *Brazil Medico* states that the hygienic transformation of the city in the last year has made marvelous strides. Many streets have been widened and straightened, others abolished altogether to make room for the new, superb Avenida Central. Streets are being paved by improved methods, preventing emanations from the subsoil, and trees are being planted to line them throughout, while vacant plots have been transformed into small parks. The editorial continues: "Rarely has there ever been witnessed such a harmonious and well planned movement on an immense scale for the rapid sanitary and esthetic transformation of a great city as is now going on in Rio de Janeiro under the vigorous rule of the present prefect, Dr. Passos, supported by the national government."

**Practice of Medicine in the Straits Settlements.**—The legislative council of the Straits Settlements, according to the *British Medical Journal*, has passed an ordinance providing for the establishment of a medical school in Singapore. The new school is to be managed by a medical man, who is to be selected by the governor of the colony, and he will be required to do his work under the supervision and control of a school council. The president of the latter body must be the individual for the time filling the office of principal medical officer in the colony and one of its six "official" members; he must be a medical man not in government employ, but holding British qualifications. The council will appoint professors.

lecturers and officials of the school, will draw up rules for the admission of students and for the course of instruction, and will grant scholarships.

**Warning Against "Gallstone Cures."**—The Board of Health of Carlsbad, Germany, has been investigating the claims of a local "Heil-Magnetopath" who advertises that he can expel gallstones in two days. He administers a strong purgative and then some oil, and in less than forty-eight hours peculiar yellowish balls are evacuated, which he claims are softened gallstones. The public warning against paying the excessively high rates charged by the magnetopath for this simple purge states that these balls are always observed after a person takes a strong purge, followed by oil. They are not gallstones, containing none of the ingredients of gallstones, and this treatment is liable to be very injurious to persons with existing inflammation at any point in the intestines. The warning further states that the magnetopath in question has been examined by two members of the medical faculty and has been found incapable of making a correct diagnosis.

**Health Conditions Among the Australasian Maoris.**—The report of Dr. Pomare, a native health officer, gives some interesting facts regarding the lives of these people and of the attempts to teach them the rudiments of hygiene and sanitation. He states that owing to the non-registration of Maori deaths it is impossible to obtain correct mortality statistics and says that typhoid fever and tuberculosis cause a large number of the deaths. Dr. Pomare believes that if smallpox were to break out in New Zealand or in any of the adjacent islands the Maoris would be helpless to combat it. In view of this danger, pamphlets in the native language have been distributed, telling of the dangers of the disease and explaining the benefits of vaccination. Dr. Pomare states that leprosy is not so prevalent as has been supposed and that many cases believed to be leprosy are in reality lupus vulgaris, tubercular syphilide, gangrene, or ichthyosis. He reports in detail three cases of true leprosy. He urges the appointment of native health inspectors and native nurses for work among these people, who are now rapidly becoming extinct.

**Seventh International Prison Congress.**—This congress convened at Budapest Sept. 3 to 9, 1905, and twenty-eight countries, including Cuba and Japan, were officially represented. The four sections of the congress were devoted to criminal law, prison administration, preventive measures and youthful delinquents. In the section on preventive measures an address was read by S. A. Knopf of New York regarding the prevention of tuberculosis in prisons, and a special committee was appointed to study the best means of avoiding infection from this source. The special feature of the congress was the American innovation of children's courts. Accounts of their workings aroused great interest. A number of prison officials advocated the adoption of out-of-door employment of prisoners. The next congress will be held at Washington in 1910, forty years after the idea of holding an international prison congress was first suggested by the United States. A report of the congress in *Charities* for October states that Hungary is one of the most progressive of nations in prison reform and in industrial and technical training of the young.

**Sanitary Measures for Puerto Cortez.**—The prominent citizens of Puerto Cortez, where yellow fever is prevalent, held a meeting October 1 and organized an association to take the necessary measures to place the country in such sanitary condition as will meet the requirements of the United States Public Health and Marine-Hospital Service. The merchants and planters along the line of railroad have been asked to cooperate in raising funds to do this work, and to employ a competent physician to act as inspector for the government. The inspector is to have absolute authority to direct the sanitary measures that are necessary and to disburse the funds, which are to be raised by local subscription. The physician is to be appointed with the approval of President Bonilla and to be satisfactory as regards his reliability and competency. A telegram was sent to President Bonilla stating the action taken. He replied that the government would be glad to do anything to place the infected zone in good sanitary condition. Up to this date, says *Public Health Reports*, the absolute authority has not been granted.

**Congress for Occupation Affections.**—An international congress devoted solely to discussion of professional affections and their prophylaxis has been organized to convene at Milan next spring. There are to be three sections, one devoted to the physiologic, pathologic and hygienic aspects of the subject, one to prophylaxis and one to assistance. Both scientific and industrial circles are co-operating to make the congress productive of results. Among the themes proposed are the injuries of night work; forms of neurasthenia in railroad employes; insanity and crime in relation to irrational regulations in various trades, etc.; professional, non-traumatic deafness; special occupation affections observed in Italy; tuberculosis and legislation on labor; women in factories and protection of infants; working in very hot or very cold rooms; alcohol; tobacco; dietetics, and various special occupation affections, studied from several points of view. The membership fee is $2 and there are no language restrictions. Brief summaries of all the articles must be sent to the secretary before the congress, and original communications must be sent in before the close of this year, to enable the committee to have them published and distributed before the opening of the congress.

**Postgraduate Courses in Germany.**—On the occasion of the inauguration of the "Empress Friedrich House" in Berlin next spring a series of notable postgraduate lectures will be given by eminent specialists from different parts of the country. This building has been designed and erected to serve as a center for practically free postgraduate instruction throughout the empire. The course next spring will be on "borderland" subjects. Bäumler will discuss the "Medicinal and Mechanohydrotherapeutic Treatment of Respiratory and Circulatory Disturbances"; von Bergmann, "Surgical Treatment of Affections of the Nerve Centers"; Curschmann, the "Indications for Surgical Intervention in Affections of the Peritoneum and Intestine"; Edinger, the "Present Status of Treatment of Nervous Affections"; Ehrlich, "Serum Therapy"; Frenkel, "Mechanical Treatment of Nervous Affections"; Gaffky, "Prevention of Infectious Diseases on the Basis of the Most Modern Experiences"; Hoffa, "Exercise, Mechanics and Massage in Treatment of Bone and Joint Affections"; Kehr, "Internal and Surgical Treatment of Gallstones"; Lassar, "Light as a Curative Factor"; Lexer, "Treatment of Septic Infection"; Michel, "Eye and Brain"; Müller, "Evolution of Diagnostic Means and Methods," and Rumpf, "Appendicitis."

**Eighth International Veterinary Congress.**—This congress was held at Budapest in September; many of the speakers were heard afterward at the International Tuberculosis Congress at Paris. In the section on pathology, the principal subject discussed was the spread of tuberculosis by domestic animals, especially the dog. The relations between tuberculosis in man and in animals was the subject of several addresses, and also the mode of infection in tuberculosis of domestic animals. De Jong of Leyden was one of those who emphasized the fact that human bacilli are identical with those of the larger domestic animals, including the dog, although the bacilli may display variations in virulence. As a rule, he said, human tubercle bacilli are less virulent than those of animals. A resolution presented by Bang of Copenhagen and Regner of Stockholm was unanimously adopted asking that the state should pay the expenses of bacteriologic diagnosis when the tuberculin test in cattle results negatively but the symptoms still indicate tuberculosis. Also that measures should be taken against tuberculosis of the lungs in cattle the same as are now enforced against udder tuberculosis. The congress further adopted a resolution asking that the extensive tests of protective vaccination should be undertaken under governmental auspices.

**Another Victory for the Organized Profession in Germany.**—THE JOURNAL chronicled at the time the wholesale resignations of the medical officers of the semi-official sickness insurance societies in Germany a year or so ago. The length of treatment was doubled by official decree while the societies refused to increase the remuneration of their physicians to correspond. The medical officers won their point nearly everywhere, but Remscheid was the scene of what was supposed to be unqualified defeat. The societies succeeded in finding enough physicians to supply the needs of the policy-holders. The imported physicians were guaranteed life positions with fair remuneration on good behavior. Two of them have recently been summarily dismissed by one society because they declined to attend a maternity case. The first one summoned was physically unable to leave his house, after a very exhausting night and day service, and the other was engaged with a number of patients whom he could not leave. When these two medical officers were thus dismissed, all the other medical officers of all the local societies resigned also in a body. The other physicians in town returned good for evil by espousing their cause. The *Leipziger Verband* also promised them pecuniary aid. The result has been that the societies have yielded completely and agreed to the terms proposed by the organized profession at the beginning of the struggle.

**Sanitation in Australia.**—Dr. Jamieson, the health officer of Melbourne, has drawn up a brief and interesting survey of the

progress made in that city in public health during the last thirty years, says the *British Medical Journal*. He selects as indications of advance or otherwise: (a) the general death rate, (b) the mortality from typhoid fever, (c) the phthisis death rate, (d) the infant mortality, and (e) the cancer death rate. With the exception of the last named he finds a marked improvement. The death rate from all causes has declined from 18.4 in 1870-2 to 14.7 in 1900-2, though there was an increased rate of 19.6 in the triennial period—which is frequently taken as a standard—1880-2. The mortality from typhoid fever was 65 per 100,000 persons in 1870-2, and has now fallen to 16 per 100,000 in 1900-2. This decline Dr. Jamieson considers to have been largely brought about by the extension of the system of deep drainage. The phthisis deaths per 100,000 were 210 in 1870-2 and 146 in 1900-2, and other tuberculous diseases have declined, though not at the same ratio. The triennial period of chief decline was in 1890-2 and subsequently. The lessened mortality from consumption is attributed to "general measures of improved sanitation, as better drainage and house construction, but, above all, to more general recognition of the benefits to be got from good lighting and ventilation, both in private dwellings and in factories, work-shops and offices." The infant mortality has fallen from 177.9 per 1,000 births in 1873-5 to 121.5 in 1900-2. In 1904, owing to exceptional conditions, it fell to 92.7 per 1,000 births. Dr. Jamieson has a different report to make regarding cancer, for in 1870-2 deaths from cancer numbered 301 per 100,000 of the population of 45 years of age and upward. In 1880-2 the rate was 324, in 1890-2, 420, and in 1900-2 509. Allowing for fallacy owing to age incidence and the proportion of persons of cancerous age living, he is of the opinion that the increase is so great and so uniform that it can hardly be explained by any changes in medical nomenclature or improvement in methods of diagnosis. On the whole, the record shows that in Melbourne preventable diseases have been in fair measure prevented.

## LONDON LETTER.

### The Cause of "Return Cases" of Infectious Diseases.

The Metropolitan Asylums Board has issued a report on return cases of scarlet fever and diphtheria, by Dr. A. G. R. Cameron, who was appointed to investigate the subject. The object was to ascertain the conditions under which return cases arise and to determine if their incidence bore any relation to the period of detention in hospital. The total number of inquiries was 900, of which about 800 were in connection with return cases of scarlet fever and diphtheria. Dr. Cameron inquired into 688 alleged infecting cases of scarlet fever, which formed 4.1 per cent. of the patients discharged from the board's hospitals during the period of inquiry, and found that 46 per cent. of these were the cause of return cases. These return cases occurred in all months of the year, but especially from November to April. No close correspondence was found between high infectivity rates and short periods of detention in hospital. Patients between the ages of 4 and 10 years appear to carry home infection more frequently than those in any other age period. Dr. Cameron attributes the infection of return cases to complications such as nasal discharge rather than to failure of disinfection or shortness of detention in hospital. He thinks that with more extended means of isolation combined with asepsis the number of return cases can be diminished. He draws much the same conclusions with regard to diphtheria. Return cases of diphtheria are less frequent than return cases of scarlet fever, but a larger proportion of the former are not preventable, as no abnormal condition, apart from bacteriologic examination, can be discovered in the infecting case. The value of the report is enhanced by an appendix of observations by the medical superintendents of the board's fever hospitals. They conclude that patients with discharging or inflamed noses are more likely than any other class to cause infection. They think that in scarlet fever late desquamation is not evidence of infectivity and that infection is sometimes carried by persons free from the disease and its sequelæ.

### The Quarterly Journal of Tropical Veterinary Science.

The want of a journal dealing with veterinary pathology in the tropics has been felt for some time. To supply this want certain officers of the Indian Civil Veterinary Department have undertaken the publication of a quarterly periodical to be called the *Journal of Tropical Veterinary Science*. Though emanating from India, it is hoped that the sphere of its activity and utility will not be limited to that country. It will contain original scientific articles, and reviews and abstracts of current literature. Among the subjects to be dealt with in the forthcoming numbers are a series of articles on the anatomy, physiology and pathology of the camel and the elephant; the intestinal and other parasites of animals; and the biting flies and ticks of India, with their importance in the transmission of disease. The first number will be ready Jan. 1, 1906. The annual subscription will be about $4.50. Communications for the editors are to be addressed to the Lahore Veterinary College, Punjab, India. Business letters should be sent to the publishers, Messrs. Thacker, Spink & Co., Calcutta.

### Epidemic Dermatitis.

The report of Dr. Monckton Copeman on an outbreak of epidemic skin disease which occurred at the Central London Sick Asylum, Hendon, in 1903, has been published by the local government board. Dr. Copeman found that this disease was similar to a malady originally termed "epidemic eczema," which had previously been observed at various metropolitan infirmaries. It occurs under a plurality of forms and does not always conform to a strictly eczematous type. In the severer cases there is considerable pyrexia and the eruption is associated with marked irritability and itching. Desquamation is a constant feature and ranges from the mere casting off of powdery scales to the shedding of the entire cuticle over the affected regions. Compared with previous outbreaks, in which the constitutional symptoms were frequently severe and the mortality reached as much as 10 per cent., the Hendon outbreak was mild. Only two deaths occurred and one of these was largely attributable to other causes. The persons attacked were generally of comparatively advanced age and subjects of various chronic ailments. Dr. Copeman has a strong suspicion that milk played an important part in the causation of the disease. When Swiss milk was substituted for the ordinary milk supply all the patients began to improve. In previous outbreaks suspicion has fallen on the milk, but bacteriologic and chemical examination failed to reveal the *materies morbi*. In the Hendon outbreak, however, a clue was afforded by the observation that the milk remained good for an abnormally long time; special attention, therefore, was directed to the detection of preservatives, with the result that in all the milk formalin was found. Hence this agent is suspected of playing a part in the causation.

### Leprosy and Fish Eating.

A work entitled "Leprosy and Fish Eating," by Mr. Jonathan Hutchinson, is announced for early publication. Mr. Hutchinson's persistent advocacy of the doctrine that leprosy is due to the eating of badly cured fish is well known. This volume will contain information as to the history of leprosy, its prevalence in different countries and the circumstances under which it has disappeared from many. Mr. Hutchinson contends that leprosy is not contagious and that the segregation of lepers is useless and their compulsory detention unjustifiable. He gives an account of his tours of inquiry in South Africa and India, and discusses the measures best adapted for the suppression of the disease in different countries. The volume will contain maps and illustrations. Whether or not Mr. Hutchinson will convince his readers of the truth of his views remains to be seen. The book will be a most important contribution to the subject of leprosy. Mr. Hutchinson has made a life study of the subject, and one of the feats of his extraordinarily capacious mind is a most minute knowledge of the history and distribution of leprosy in every country in the world.

### Importation of Chinese Pigtails.

Considerable sensation has been produced by the revelation at an inquest at Bradford on a workman who died of anthrax and who had been employed in opening camel hair, low foreign wool, low hair and human hair for a firm of wool combers. In reply to the coroner the foreman said that the human hair came from China in 1,000-pound packages. The hair came in just as if it had been cut from a Chinaman's head and rolled up in pigtails. For all the foreman knew, the hair might have been cut from the head of a man suffering from plague or other infectious disease. The deceased had been inoculated with Sclavo's serum without result. The coroner said that under the circumstances and considering the fact that two cases of anthrax had occurred at these works, he thought that further inquiries should be made with regard to the human hair manipulated by the firm. Ordinarily the hair that came from China was made into wigs. He said that he thought this hair should be examined.

### Plague in Calcutta in 1904.

The official report on plague in Calcutta by Dr. F. T. Pearse, special health officer, with appendices by Drs. Hossack and

Crake, has just been issued. The most striking feature of the plague in Calcutta, as in other parts of the world, is the persistency of the seasonal recurrence. Plague in Calcutta reaches a maximum in the month of April and falls to a minimum in July, and the very weeks of the maximum and minimum recur year after year with remarkable regularity. The coincident appearance of plague in rats is confirmed to a striking degree. In the month of January of each year the mortality in rats increases and cases of plague of the bubonic type reappear in man about the same time. The type of plague during the "quiescent period," i. e., when the disease is more or less sporadic, differs from that encountered during the period of "active" outbreak. With the approach of the active period the bubonic type prevails and increases as the outbreak waxes in virulence. With the wane of the outbreak the bubonic type of the disease diminishes, and during the quiescent stage is rare or absent. Cases of illness during the quiescent period are in danger of being returned as plague when due to other causes. Dr. Hossack is so impressed with this fact that he thinks that for a period of two or three months the city is practically free from plague. Exact computation of the number of cases of plague in Calcutta is impossible. When a death is reported the medical inspectors are dependent on the history of the illness given by the friends of the deceased, whether the patient suffered from plague or not. As in the majority of cases the patients are not seen alive, and most of the dead are buried without postmortem examination, bacteriologic examination is seldom possible. The mortality from plague, whatever the season, is over 90 per cent., and it is actually computed to be higher during the quiescent period than during the active period of disease. It is satisfactory to hear that the operations of the plague department caused no excitement or agitation. The upper middle class are pleased at the removal from their neighborhood of insanitary dwellings, while the compensation paid to hut owners is amply sufficient, especially as the owner is allowed to retain the materials of his hut.

### Opening of a Scottish College of Hygiene.

A college of hygiene and physical training instituted by the Carnegie Dunfermline trustees has been formally opened by Lord Linlithgow, secretary for Scotland. Following the method established for the training of teachers in elementary schools, it will form a great practicing school for 4,500 school children. The college proper consists of young women preparing for the teaching of physical culture as a profession or acquiring a knowledge of it for their personal benefit. In the near future it is proposed also to receive men.

### Sex and Genealogy.

A writer in the lay press, Mr. Fox-Davies, who has made a special study of genealogy, brings forward some curious and interesting facts. The list known as the the Roll of Battle Abbey gives the names of the upper classes of the Norman invaders of England. 1. With very few exceptions all those names have now ceased to exist. 2. At the present day the names of plebeian origin show an overwhelming preponderance over those of patrician origin. 3. All the ancient baronies heritable by women have without exception left the family in which they were created. Another aspect of the same phenomenon is that although baronies have been created in continuous succession since 1446 (the date of the earliest one which has survived), the baronies in existence may be divided as follows: A small number (about twenty), are ancient baronies heritable by women, and about 320 are to heirs male. Of the latter as many as 250 have been created since 1802 and as many as 175 since 1850. Of all the baronies created between 1446 and 1802 only 70 survive. On the other hand, most of the old Norman families can be shown still to exist in the female line. The obvious deduction from these facts is that the tendency in patrician families is for the girls to survive. Mr. Fox-Davies thinks that this bears out Schenk's theory that good living and abundance of food tends to make a woman produce females and privation to make her produce males.

## DUBLIN LETTER.

### Election of Representative to the General Medical Council.

The medical profession in the United Kingdom is governed by a body known as the general medical council, the constitution of which is somewhat peculiar. It consists of one representative from each of the universities and licensing bodies of the kingdom, together with three nominees of the crown, one from each country, and three representatives elected directly by the members of the profession. These so-called direct representatives sit for a period of five years and are eligible for re-election. The present representative for Ireland, Sir William Thomson, has held his seat since 1896, and consequently has to offer himself for re-election at the beginning of next year. In 1901 he was opposed by Dr. Laffan, a well-known general practitioner in the south of Ireland, who however, received but little support. At the forthcoming election more vigorous opposition is promised. It is, of course, a matter of discontent among the rank and file of the profession that their government is so much in the hands of the consultant and specialist class, from whom the college and crown representatives are entirely chosen. It is urged, therefore, that it is unwise to miss an opportunity of returning a general practitioner to the council, and as Sir William Thompson is, of course, a well-known Dublin surgeon and teacher, it looks as if he would have to make room for a "man of the people." Two well-known country practitioners have announced their intention of being candidates—Dr. Leonard Kidd of Enniskillen and Dr. Mahon of Ballinrobe. The former is an ex-president of the Irish Medical Association, while the latter is a well-known and energetic member of the same body. Each is receiving a large share of support throughout the country, particularly in his own district. In addition, Belfast, which always shows great jealousy of the capital in medical as well as in other matters, is giving much support to Dr. Kidd. It is probable, however, that in spite of the opposition, Sir William Thomson will retain his seat.

### Irish Prisons.

The twenty-seventh report of the general prisons board of Ireland was issued recently and shows that the health of the prisoners on the whole has been good, while there has been no outbreak of infectious disease. In fact, the only zymotic disease which runs into two figures in the statistics of incidence is influenza, from which Mountjoy, County Waterford and Maryborough prisons suffered heavily. The number of cases of phthisis treated during the year is remarkably small—19. Apart from executions there were only 8 deaths during the year; one of these was from rupture of the heart in the case of a prisoner awaiting execution, and another was from perforation of the intestine in typhoid fever. Twenty prisoners were released during the year on medical grounds. Viewed from the social aspect, it is very satisfactory to note the continued decrease of serious crime in Ireland. One prison (that of Wexford) has been closed during the year, thus reducing the 42 which existed at the passing of the prison act in 1877 to 19. It is hoped, moreover, during the current year to close the Limerick female prison. The number of local prisoners has remained fairly constant for the past few years, but the number of convicts is remarkably small. Whereas on Jan. 1, 1855, there were 3,427 convicts in custody, and in 1870, 1,230, on Jan. 1, 1904, there were only 252. Of these only 10 were women. The industries in which the prisoners are employed are very varied, including baking, brush making, carpentry, cutting firewood, mat making, knitting, needlework, sack making, shoemaking, smithing, stone breaking, tailoring, washing, weaving of matting, frieze, linsey and blankets, mail bag making, and cutting of linen for paper making. On a daily average only 163 were employed in picking oakum. It is intended to extend as much as possible the principle of associated labor, and the prisons board at present is erecting large workshops in Mountjoy.

The number of inmates of the State Inebriate Reformatory at Ennis during the year has been a little over 30. It is unfortunate that more use is not made of this institution, as experience up to the present, in the case of those who have undergone prolonged sentences, gives gratifying evidence of the beneficial results of the treatment. On this point the board remarks: "As it has now been clearly proved that the reformatory treatment in many cases has succeeded beyond expectation, it is a matter of much regret that more of the habitual inebriates for whom the institution was established are not sent there, and also, that in the cases of some of those who are sent, the term of committal is so short as not to afford a fair opportunity of applying the remedial influence of the reformatory. There was an improvement shown in this respect last year, as compared with 1903, inasmuch as while in 1903 three sentences of less than eighteen months were passed, only one such was passed in 1904. This latter, however, was for the very short term of six months, a period in the opinion of all those who have any experience of the institution, altogether too short."

# Pharmacology

### Sal-Codeia—Bell.

According to the advertisements "Salacetin"

> "is a combination with heat of salicylic and glacial acetic acids with phenylamine, the irritating, depressing and blood corpuscle destroying elements removed."

According to the Committee on Chemistry of the Council on Pharmacy and Chemistry of the American Medical Association, whose report was published in THE JOURNAL of the American Medical Association June 3, 1905, p. 1791, "Salacetin" is a mixture of acetanilid, salicylate of sodium and bicarbonate of sodium. Sal-Codeia (Salacetin-Codein), therefore, would be the same as the above with codein added. Of course, acetanilid and codein will relieve pain (it could not be otherwise) and consequently make a very good combination in certain conditions, if not used too often and if used with care. While the continued use of codein is not likely to produce a drug habit, it, as well as acetanilid, does do so sometimes, and it must be remembered that codein is a motor paralysant, and is not the best combination to be used with acetanilid. For those who wish to give a combination of acetanilid, salicylate of sodium and codein, the following prescription is suggested:

| | | | |
|---|---|---|---|
| ℞. | Acetanilid | 3i | 4 |
| | Sodii bicarbonatis | 3ss | 2 |
| | Sodii salicylatis | 3ss | 2 |
| | Codein sulph. | gr. vi | 4 |

M. et div. chart No. xxiv.

This will make five-grain powders which may be put in papers, capsules, cachets or tablets. Each will contain 2½ grains (0.15) of acetanilid and 1¼ grains (0.075) each of sodium salicylate and sodium bicarbonate, with ¼ grain (0.015) of codein.

The doses of acetanilid and of codein approximate the average adult doses, but the sodium salicylate, to have any appreciable effect, must be increased, for 1¼ grains of salicylate of sodium in a dose is insignificantly small. Sodium salicylate with acetanilid makes a fairly good combination in certain rheumatic troubles, but it is not indicated by any means as a cure-all, as one would judge from the literature sent out by the Sal-Codeia—Bell people.

### Resolutions on Patent Medicines.

At a meeting of the third councilor district of the Michigan State Medical Society, Oct. 18, 1905, the following resolutions were presented by Dr. A. S. Kimball of Battle Creek, and were adopted by the Society:

*Whereas*, The American people are being daily humbugged, robbed and poisoned by venders of patent nostrums, and that, largely through the medium of the press, and

*Whereas*, Through their fearless, scathing and denunciatory editorials, their concise analyses and clever exposures by their contributors, *Collier's Weekly* and the *Ladies Home Journal* are doing immeasurable good in their praiseworthy campaign against this "American Fraud," be it

*Resolved*, That this meeting of the Third Councilor District of the Michigan State Medical Society extend its heartiest thanks and earnest commendations to P. F. Collier and Son, and the Curtis Publishing Co. for this splendid work. And be it further

*Resolved*, That copies of these resolutions be furnished the editors of *Collier's Weekly*, *The Ladies' Home Journal*, THE JOURNAL of the American Medical Association, and *The Journal of Michigan State Medical Society*.

### Proprietary Remedies in Great Britain.

In an editorial on the recent meeting of the British Medical Association at Leicester, the *Bristol Medico-Chirugical Journal* in commenting on the drugs, appliances, etc., which were exhibited, states: "It is satisfactory to find that the supply of special proprietary exhibits appears to be declining; it is impossible to use more than a small fraction of those on the market, and many of them are no better than the simpler preparations of the Pharmacopeia. Regardless of the principles of scientific drugging, the prescriber appears to have drifted into the hands of the semiscientific pharmacist in search of some proprietary compound to which a short but meaningless name may be attached, and it is too often the case that an elaborate but unscientific compound is selected by the prescriber instead of a more simple preparation of the drug he requires. The art of prescribing appears to be fast dying out; even physicians are adopting the ways of the surgeons by prescribing some well-known elaborate compound, the name of which is short and takes little time to write. The pharmacist makes his compounds elaborate in order that they may be the less easily imitated, but who can say what will be the combined effect of some twenty drugs in combination, even if the individual effect of each one may be foretold. Doubtless many of these combinations have proved themselves to be useful and have come into general use deservedly, but on the other hand there are many others whose only virtue depends on an incessant and barefaced laudatory advertisement."

### An Australian Point of View.

Medical acts all the world over have been passed, not in the interests of the medical profession, but for the purpose of protecting the public and enabling them to distinguish between those who are regarded by the state as properly qualified and those who are not. A considerable number of medical practitioners think that legislative action should be taken for the repression of unqualified practice altogether. Most of those who clamor for the legal restriction of quacks do so openly in the interests of the public. I venture to take a different view. Personally, I do not believe that quackery does the slightest harm to the medical profession from a pecuniary point of view. But that is not the important question. What is requisite is that the public should be better informed on these matters, and more will be done by educating the people than by legal enactment. People must be made to realize both the limitations and possibilities of treatment, and must get rid of their antiquated and superstitious notions of the action of drugs, too many of which, I regret to say, are too often supported by some of our own profession. Much could be done by making public the real composition of quack preparations, and here legislation can be of service. The mysterious always appeals to the ignorant. Even the cultured can be attracted by artistic mysticism, as evidenced by the vogue of Maeterlinck, the so-called Shakespeare of Belgium. Take away the cloak of secrecy from quack medicines; let it be known that so-and-so's "Wizard Oil" is only turpentine, camphor and ammonia; that somebody else's "Soothing Syrup" is composed of morphia, with essence of anise and balsam of tolu, and the occupation of their manufacturers would be, like Othello's, gone. Hence the angry commercial protest against recent legislation in New Zealand on the subject of patent and proprietary medicines. The New Zealand Parliament passed an act, under which regulations were framed, making it compulsory that the formula of all patent and proprietary medicines should be printed on the bottle, and that if any poison were contained in the preparation it must be labelled accordingly. The manufacturers of patent medicines, and their agents, raised such powerful protests, and brought such influence to bear, that the regulations were modified, to the extent that the formula, instead of being placed on the bottle, was to be lodged with the Health Department. The manufacturers still objected, and, as no further alterations in the regulations could be obtained, they decided not to send their medicines to New Zealand. Evidently they realize very clearly that, once the real nature and commercial value of their preparations became publicly known, they would have no demand at the extravagant prices at which they had hitherto been sold.—G. A. Syme, M.S., F.R.C.S., in *Intercolonial Medical Journal of Australasia*.

### The Great American Fraud, Peruna, and the "Bracers."

SAMUEL HOPKINS ADAMS.

A distinguished public health official and medical writer once made this suggestion to me:

"Let us buy in large quantities the cheapest Italian vermouth, bad gin and bitters. We will mix them in the proportion of three of vermouth to two of gin with a dash of bitters, dilute and bottle them by the short quart, label them 'Smith's Revivifier and Blood-Purifier; dose, one wineglassful

before each meal'; advertise them to cure erysipelas, bunions, dyspepsia, heat rash, fever and ague, and consumption; and to prevent loss of hair, smallpox, old age, sunstroke and near-sightedness, and make our everlasting fortunes selling them to the temperance trade."

"That sounds to me very much like a cocktail," said I.

"So it is," he replied. "But it's just as much a medicine as peruna and not as bad a drink."

Peruna, or, as its owner, Dr. S. B. Hartman of Columbus, Ohio (once a physician in good standing), prefers to write it, Pe-ru-na, is at present the most prominent proprietary nostrum in the country. It has taken the place once held by Green's nervura and by Paine's celery compound, and for the same reason which made them popular. The name of that reason is alcohol. Peruna is a stimulant pure and simple, and it is the more dangerous in that it sails under the false colors of a benign purpose.

According to an authoritative statement given out in private circulation a few years ago by its proprietors, peruna is a compound of seven drugs with cologne spirits. This formula, they assure me, has not been materially changed. None of the seven drugs is of any great potency. Their total is less than one-half of 1 per cent. of the product. Medicinally, they are too inconsiderable, in this proportion, to produce any effect. There remains to peruna only water and cologne spirits, roughly in the proportion of three to one. Cologne spirits is the commercial term for alcohol. Any one wishing to make peruna for home consumption may do so by mixing half a pint of cologne spirits, 90 proof, with a pint and a half of water, adding thereto a little cubebs for flavor and a little burnt sugar for color. It will cost, in small quantities, perhaps seven or eight cents per quart. Manufactured in bulk, so a former peruna agent estimates, its cost, including bottle and wrapper, is about eight and one-half cents. Its price is $1.00. Because of this handsome margin of profit, and by way of making hay in the stolen sunshine of peruna advertising, many imitations have sprung up to harass the proprietors of the alcohol-and-water product. Pe-ru-vi-na, p-ru-na, purina, anurep (an obvious inversion); these, bottled and labeled to resemble peruna, are self-confessed imitations. From what the peruna people tell me, I gather that they are dangerous and damnable frauds, and that they cure nothing.

What does peruna cure? Catarrh. That is the modest claim for it; nothing but catarrh. To be sure, a careful study of its literature will suggest its value as a tonic and a preventive of lassitude. But its reputation rests on catarrh. What is catarrh? Whatever ails you. No matter what you've got, you will be not only enabled, but compelled, after reading Dr. Hartman's peruna book, "The Ills of Life," to diagnose your illness as catarrh, and to realize that peruna alone will save you. Pneumonia is catarrh of the lungs; so is consumption. Dyspepsia is catarrh of the stomach. Enteritis is catarrh of the intestines. Appendicitis—surgeons, please note before operating—is catarrh of the appendix. Bright's disease is catarrh of the kidneys. Heart disease is catarrh of the heart. Canker sores are catarrh of the mouth. Measles is perhaps, catarrh of the skin, since "a teaspoonful of peruna thrice daily or oftener is an effectual cure" ("Ills of Life"). Similarly, malaria, one may guess, is catarrh of the mosquito that bit you. Other diseases not specifically placed in the catarrhal class, but yielding to peruna (in the book), are colic, mumps, convulsions, neuralgia, women's complaints and rheumatism. Yet, "peruna is not a cure-all," virtuously disclaims Dr. Hartman, and grasps at a golden opportunity by advertising his nostrum as a preventive against yellow fever! That alcohol and water, with a little coloring matter and one-half of one per cent. of mild drugs, will cure all or any of the ills listed above is too ridiculous to need refutation. Nor does Dr. Hartman himself personally make that claim for his product. He stated to me specifically and repeatedly that no drug or combination of drugs, with the possible exception of quinin for malaria, will cure disease. His claim is that the belief of the patient in peruna, fostered as it is by the printed testimony, and aided by the "gentle stimulation," produces good results. It is well established that in certain classes of disease the opposite is true. A considerable proportion of tuberculosis cases shows a history of the peruna type of medicines taken in the early stages, with the result of diminishing the patient's resistant power, and much of the typhoid in the Middle West is complicated by the victim's "keeping up" on this stimulus long after he should have been under a doctor's care. But it is not as a fraud on the sick alone that peruna is baneful; but as the maker of drunkards also.

"It can be used any length of time without acquiring a drug habit," declares the peruna book, and therein, I regret to say, lies specifically and directly. The lie is ingeniously backed up by Dr. Hartman's argument that "nobody could get drunk on the prescribed doses of peruna."

Perhaps this is true, though I note three wineglassfuls in forty-five minutes as a prescription, which might temporarily alter a prohibitionist's outlook on life. But what makes peruna profitable to the maker, and a curse to the community at large, is the fact that the minimum dose first ceases to satisfy, then the moderate dose, and finally the maximum dose, and the unsuspecting patron, who began with it as a medicine, goes on to use it as a beverage, and finally to be enslaved by it as a habit. A well-known authority on drug addictions writes me:

" . . . I have, in the last two years, met four cases of persons who drank peruna in large quantities to intoxication. This was given to them originally as a tonic. They were treated under my care as simple alcoholics. . . ."

"But why should any one who wants to get drunk drink peruna when he can get whiskey?" argues the nostrum maker.

There are two reasons, one of which is that in many places the "medicine" can be obtained and the liquor can not. Maine, for instance, being a prohibition state, does a big business in patent medicines. So does Kansas. So do most of the no-license counties in the South, though a few have recently thrown out these disguised "boozes." Indian Territory and Oklahoma . . . have done so because of Poor Lo's predilection toward curing himself of depression by these remedies, and for a time, at least, peruna was shipped in in unlabeled boxes. . . .

The other reason why peruna or some other of its class is often the agency of drunkenness instead of whisky is that the drinker of peruna doesn't want to get drunk; at least she doesn't know that she wants to get drunk. I use the feminine pronoun advisedly, because the remedies of this class are largely supported by women. Lydia Pinkham's variety of drink depends largely on its alcohol. Paine's celery compound relieves depression and lack of vitality on the same principle that a cocktail does, and with the same necessity for repetition. I knew an estimable lady from the Middle West who visited her dissipated brother in New York—dissipated from her point of view, because she was a pillar of the W. C. T. U.—and he frequently took a cocktail before dinner and came back with it on his breath, whereon she would weep over him as one lost to hope. One day in a mood of brutal exasperation, when he hadn't had his drink, and was able to discern the flavor of her grief, he turned on her:

"I'll tell you what's the matter with you," he said. "You're drunk—maudlin drunk!"

She promptly and properly went into hysterics. The physician who attended diagnosed the case more politely, but to the same effect, and ascertained that she had consumed something like half a bottle of Kilmer's swamp root that afternoon. Now, swamp root is a very creditable "booze," but much weaker in alcohol than most of its class. The brother was greatly amused, until he discovered to his alarm that his drink-abhorring sister could not get along without her patent-medicine bottle! She was in a fair way, quite innocently, of becoming a drunkard.

### DUFFY'S MALT WHISKEY.

From its very name, one would naturally absolve Duffy's malt whiskey from fraudulent pretence. But Duffy's malt whiskey is a fraud, for it pretends to be a medicine and to cure all kinds of lung and throat diseases. It is especially favored by temperance folk. "A dessertspoonful, four to six times a day, in water, and a tablespoonful on going to bed" (personal prescription for consumptive), makes a fair grog allowance for an abstainer.

"You must not forget," writes the doctor in charge, by way of allaying the supposed scruples of the patient, "that taking Duffy's malt whiskey in small or medicinal doses is not like taking liquor in large quantities, or as it is usually taken. Taking it a considerable time in medicinal doses, as we direct, leads to health and happiness; while taken the other way, it often leads to ruin and decay. If you follow our advice about taking it, you will always be in the temperance fold, without qualm of conscience."

It has testimonials ranging from consumption to malaria, and indorsements of the clergy. On the opposite page is reproduced a Duffy advertisement showing the "portraits" of three "clergymen" who consider Duffy's pure malt whiskey a gift of God; and above them a saloon window-display of this product. For the whiskey has its recognized place behind the bar, sold by the manufacturers to the wholesale liquor trade and by them to the saloons, where it may be purchased over the counter for 85 cents a quart. This is cheap, but Duffy's pure malt whiskey is not regarded as a high-class article.

Its status has been definitely settled in New York state, where Excise Commsisioner Cullinan recently obtained a decision in the Supreme Court declaring it a liquor. The trial was in Rochester, where the nostrum is made. Eleven supposedly reputable physicians, four of them members of the health department, swore to their belief that the whiskey contained drugs, which constituted it a genuine medicine. The state was able to show conclusively that if remedial drugs were present, they were in such small quantities as to be indistinguishable, and, of course, utterly without value; in short, that the product was nothing more or less than sweetened whiskey. Yet the United States government has long lent its sanction to the "medicine" status by exempting Duffy's pure malt whiskey from the federal liquor tax. . . . Other "drugs" there are which sell largely, perhaps chiefly, over the bar, Hostetter's bitters and Damiana bitters being prominent in this class.

Hostetter's bitters contain, according to an official state analysis, 44 per cent. of alcohol; Lydia Pinkham appeals to suffering womanhood with 20 per cent. of alcohol; Hood's Sarsaparilla cures "that tired feeling" with 18 per cent.; Burdock's blood bitters with 25 per cent.; Ayer's sarsaparilla with 26 per cent.; and Paine's celery compound with 21 per cent. The fact is that any of these remedies could be interchanged with peruna or with each other, so far as effect goes, though the iodid of potassium in the sarsaparillas might have some effect on the stomach as likely to be harmful as helpful, which would be lacking in the simpler mixtures. . . .—Excerpts from *Collier's Weekly*, October 28.

## Correspondence

### Reciprocity Between New Jersey, New York and Other States.

CAMDEN, N. J., Oct. 31, 1905.

*To the Editor:*—At a conference held between the board of regents of New York and the State Board of Medical Examiners of New Jersey, at Trenton, N. J., October 16, it was decided to indorse each other's examined licentiates without further examination, beginning Jan. 1, 1906.

The medical license of New Jersey is indorsed, at this time, in lieu of further examination, by Maine, Vermont, Delaware, Virginia, South Carolina, Texas, Ohio, Illinois, Michigan, Minnesota, Wisconsin, Kansas and Colorado.

New Jersey will indorse the medical license issued by any state, after examination, whose educational, examining and licensing requirements are substantially equal to or higher than those of New Jersey, irrespective of reciprocity, provided the applicant complies with the conditions of indorsement.

The standard of requirements of New Jersey consists of a high school diploma issued after four years of study, and a medical diploma issued after four courses of lectures of at least seven months each, in four different calendar years, in a medical college of approved standing.

E. L. B. GODFREY, M.D.,
Secretary State Board of Medical Examiners of New Jersey.

## Marriages

M. LUTHER KOSER, M.D., to Miss Blades, both of Cherryvale, Kan., October 18.

E. STANTON HYMER, M.D., to Miss Helen Richardson, both of Chicago, June 29.

WALTER B. DOBSON, M.D., to Miss Clio Legard Best, both of Leland, Miss., October 19.

M. H. SAWYER, M.D., to Miss Barbra Peterson, both of Linn Grove, Iowa, October 18.

EDMUND JOSEPH BALL, M.D., to Miss Margaret Daly, both of Valparaiso, Ind., October 18.

FRANCIS E. FITZGERALD, M.D., to Miss Rose Jennings Hynes, both of Omaha, October 18.

J. EDWARD SMITH, M.D., to Miss Lucy Spalding, both of Bardstown, Ky., October 11.

MOSES EISENSTAEDT, M.D., to Miss Blanche Janet Benjamin, both of Chicago, November 1.

HERMAN H. KAMMAN, M.D., to Miss Bessie Tormohlen, both of Columbus, Ind., October 19.

SIDNEY R. CARSLEY, M.D., to Miss Lois Emerette Lyon, both of Vergennes, Vt., October 18.

FRED BAUMGART, M.D., Danville, Ill., to Miss Anna Hoehn of Columbus, Neb., October 26.

WILLIAM HERBERT POWERS, M.D., to Miss Violet Harris, both of Ocala, Fla., October 16.

WILLIS BRYANT JONES, M.D., to Miss Lena Elizabeth Swift, both of Atlanta, Ga., October 25.

GARLAND M. VADEN, M.D., Capeville, Va., to Miss Evelyn Wyat of Onancock, Va., recently.

REXWALD BROWN, M.D., Chicago, to Miss Elizabeth Murphy of Hortonsville, Wis., October 21.

O. W. OKERLIN, M.D., Liscomb, Iowa, to Miss Sue R. Denne of near Atlantic, Iowa, October 18.

ROBERT EARL CONKLIN, M.D., Alma, Neb., to Miss Jessie A. Riley of Fairbury, Neb., October 18.

JACKSON LEE MARTIN, M.D., Fresno, Cal., to Miss Elizabeth Kirk of Marysville, Cal., October 18.

EMMA PEARSON, M.D., Van Wert, Ohio, and C. M. RANDALL, M.D., of Bay City, Mich., October 18.

J. FRANK HUSS, M.D., Atlanta, Ga., to Miss Annie Lamar Jackson of Covington, Ga., October 25.

HUGH EMORY SMITH, M.D., St. Johns, Mich., to Miss Alberta Allen of Kalamazoo, Mich., October 18.

JOHN G. RULISON, M.D., Ann Arbor, Mich., to Miss Edith Benjamin of Flushing, Mich., October 18.

NATHAN P. STAUFFER, M.D., Philadelphia, to Miss Anna L. Pennock of Lansdowne, Pa., October 26.

JAMES L. HOLDEN, M.D., to Miss Hazel R. Coyle, both of Zanesville, Ohio, at Cincinnati, October 18.

CHARLES G. MCEACHERN, M.D., to Miss Laura Donna Griffin, both of Moss Point, Miss., October 26.

CHARLES M. RUSSELL, M.D., Columbia, Ky., to Miss Angeline Clark of Bowling Green, Ky., October 24.

PAUL GERHARDT WOOLLEY, M.D., to Miss Helen Bradford Thompson at Yokohama, Japan, August 8.

WILLIS E. GOULD, M.D., North Leeds, Maine, to Miss Eunice Libby of South Hartford, Maine, October 18.

ETHELBERT HINES GALLOWAY, M.D., to Miss Mabel Clare Johnson, both of Jackson, Mich., November 1.

THOMAS CHESTER RUTTER, M.D., Hazleton, Pa., to Miss Veronica H. Tait of Weatherly, Pa., October 19.

G. BROWN MILLER, M.D., Washington, D. C., to Miss Virginia Blake of Woodlands, Ascot, England, recently.

BENJAMIN R. SANFORD, M.D., Glimp, Tenn., to Miss Hattie Bruce Fitzpatrick of Henning, Tenn., October 18.

SAMUEL WALTON DAY, M.D., Auburn, N. Y., to Miss Minnie Belle Hasbrouck of Skaneateles, N. Y., October 17.

REYNOLDS J. MAPES, M.D., Encampment, Wyo., to Miss Anna L. Terry of Chicago, at Rawlins, Wyo., October 20.

PAUL J. BURRELL, M.D., Winslow, Ill., to Miss Minnie Van Dervort of Warren, Ill., at Galena, Ill., October 17.

PETER J. GILLEN, M.D., Prairie du Rocher, Ill., to Miss Mae E. Burch of Fort Gage, Ill., at Cairo, Ill., October 17.

WILLIAM G. WEGNER, M.D., South Bend, Ind., to Miss Laura Christine Braeckly of Huntingburg, Ind., October 24.

THOMAS JEFFERSON COLLIER, M.D., Atlanta, Ga., to Miss Gertrude McCarley of Chattanooga, Tenn., October 10.

DAVID RUSSELL LYMAN, M.D., Wallingford, Conn., to Miss Virginia Scott Cocke of "Lower Bremo," Va., October 12.

HARVEY L. BIGGS, M.D., Prestonburg, Ky., to Miss Lota Newman of Ashland, Ky., at Ironton, Ohio, September 23.

EDITH CADWALLADER, M.D., Philadelphia, and THOMAS REID CROWDER, M.D., of Chicago, at Titusville, Pa., October 26.

FREDERICK L. VAN SICKLE, M.D., Olyphant, Pa., to Miss Christine Law Macmillan of Kansas City, Mo., October 25.

JOHN MORRIS ENGLISH, M.D., to Miss Sophronia Mary Clarkson, both of Elizabethtown, Ky., at Louisville, Ky., October 19.

## Deaths

Charles **M. Shanley, M.D.** Baltimore Medical College, 1894, died from a relapse of yellow fever at his plantation home, Bayou Barataria, La., October 16. Dr. Shanley was formerly a member of the American Medical Association and was one of the proprietors of the Lidgerwood (N. D.) sanatorium. He moved to Louisiana in 1902, where he bought a plantation. On the outbreak of yellow fever in that section Dr. Shanley volunteered, although he was not immune, and did good and valiant service until he was atacked by the disease. He was brought to New Orleans at once, was cared for at the Emergency Hospital, and was discharged in due time as cured. Without waiting fully to recover from the effects of his illness, he returned to Bayou Barataria, against the advice of his brother physicians, to resume his self-sacrificing work, but the strain proved to be more than his enfeebled condition could bear and, suffering a relapse, he died. The Jefferson Parish board of health, at a meeting held in Gretna, adopted resolutions commendatory of the life and work of Dr. Shanley.

**Frank K. Owen, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1872, dean of the medical profession of Ypsilanti, Mich., and health officer of that city; surgeon of the Thirty-first Michigan Infantry, U. S. V., in the Spanish-American War, and a veteran of the Civil War, died suddenly from heart disease at St. Mary's Hospital, Detroit, where he had gone to prepare for the removal of a small tumor from the left arm, October 14, aged 64.

**William F. Milligan, M.D.** Medical College of Ohio, Cincinnati, 1892, of Wabasha, Minn., a member of the American Medical Association, member of the Minnesota legislature in 1900; twice mayor of Wabasha; one of the founders of St. Elizabeth's Hospital, a man who stood high both in his profession and as a man of affairs, died at the Chicago Hospital, Chicago, October 1, twenty-four hours after an operation for appendicitis, aged 37.

**Abram Hugh Moss, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1879, a member of the American Medical Association and the Louisiana State Medical Society; for many years one of the leading practitioners of Lake Charles, La., died at his home in San Bernardino, Cal., October 12, from heart disease of long standing, aged 62.

**John W. Mock, M.D.** Medical College of Ohio, Cincinnati, 1863, assistant physician at Longview Asylum, Cincinnati, then acting assistant surgeon United States Army and later assistant surgeon of the Eleventh Ohio Volunteer Infantry during the Civil War, died from nephritis at his home in Covington, Ind., September 26, aged 69.

**Joseph Francis Pickerel, M.D.** Kansas Medical College, Topeka, 1895, a member of the American Medical Association; health officer of Butler County, Kan.; who had practiced in Beverly, Lincoln and Wichita, Kan., shot and killed himself in his office in Eldorado, Kan., October 12, while under the influence of drugs, aged 39.

**John Howard Taylor, M.D.** University of Pennsylvania, Philadelphia, 1852, surgeon in the Civil War, who attended General Hancock after he was wounded at the battle of Gettysburg; for several years medical inspector of the Philadelphia Bureau of Health, died at his home in Philadelphia, October 24, aged 73.

**James W. Smith, M.D.** Kansas City (Mo.) Medical College, 1878, formerly superintendent of Hospital for the Insane No. 1, Fulton, and one of the board of managers of Hospital for the Insane No. 4, Nevada, died suddenly at his home in Pleasant Hill, Mo., October 20, from nephritis, after a long illness.

**Wilbur Fiske Myers, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1875, a member of the Venango County (Pa.) Medical Society; once a member of the city council of Franklin, died suddenly at his office in that city October 3 from heart disease, aged 55.

**John O. Dawson, M.D.** Rush Medical College, Chicago, 1879, a member of the American Medical Association, and a leading practitioner of Lincoln, Neb., died suddenly at his office in that city, October 18, from angina pectoris, aged 57.

**Max Urwitz, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1881, a member and president of the school board of Houston, Texas, died suddenly at his home in that city, October 2, from cerebral hemorrhage, aged 55.

**Lorenzo Adelbert Snyder, M.D.** Ohio Medical University, Columbus, 1898, of Chicago Heights, Ill., died at the Augustana Hospital, Chicago, October 16, after an illness of five weeks, and five days after an operation for appendicitis, aged 33.

**Judson Pennypacker, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 186-, assistant surgeon United States Army during the Civil War, died at his home in West Chester, Pa., October 4, aged 67.

**Orrin Peak, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1854, surgeon of the Twentieth Wisconsin Volunteer Infantry in the Civil War, died at his home in Oak Park, Ill., October 8, aged 79.

**W. H. Walthall, M.D.** Medical College of Virginia, Richmond, 1861, surgeon in the Confederate service throughout the Civil War, died at his home in Roanoke, Va., October 18, from paralysis, after an illness of one year, aged 70.

**John W. Lansing, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1887, mayor of Ritzville, Wash., health officer of Adams County, died at his home in Ritzville, October 16 from chronic interstitial nephritis, aged 44.

**George Johnson, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1854, a member of the Medical and Chirurgical Faculty of Maryland, died at his home in Frederick, Md., October 25, aged 73.

**David J. Reese, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1873, of Renovo, Pa., died from paralysis in the Lock Haven Hospital September 30, after an illness of two years, aged 65.

**Frederick A. Smith, M.D.** Harvard University Medical School, Boston, 1878, a practitioner of Boston for many years, died at Belhart, Texas, September 26, from tuberculosis, after a prolonged illness, aged 50.

**Louis J. A. Simard, M.D.** Bellevue Hospital Medical College, New York City, 1865, a well-known oculist and aurist of Quebec, P. Q., died at his home in that city, October 6, after an illness of two years.

**William Henry Purman, M.D.** Howard University Medical Department, Washington, D. C., 1887, of Bloomsburg, Pa., died at Millheim, Pa., October 2, from heart disease, after a long illness, aged 49.

**William W. Park, M.D.** Years of Practice, Illinois, 1878, a veteran of the Civil War, was struck by a freight train near his home in Woodberry, Ill., October 19, and died a few minutes later.

**Henry W. Wales, M.D.** Illinois, 1863, of Lanark, Ill., a veteran of the Civil War, died at Walter's Park Sanitarium in Pennsylvania, October 6, after an invalidism of a year, aged 65.

**Edwin L. Sessions, M.D.** Louisville (Ky.) Medical College, 1879, died at his home in Hillsboro, Texas, October 12, from cerebral hemorrhage, after an illness of one week, aged 63.

**John Slavens, M.D.** University of Louisville (Ky.) Medical Department, 1848, an old resident of Putnam County, Indiana, died at his home in Brick Chapel October 10, aged 94.

**John W. Ogilvie, M.D.** Medical College of the State of South Carolina, Charleston, 1845, died at his home near Allendale, S. C., September 27, after a lingering illness, aged 87.

**Percy E. Terry, M.D.** Rush Medical College, Chicago, 1886 died at his home in Rochester, Ind., September 30, from spinal disease after an illness of two months, aged 44.

**George W. Parsons, M.D.** Cincinnati, 1864, a veteran of the Civil War, of Kansas City, Kan., died at the Soldiers' Home, Leavenworth, Kan., October 18, aged 68.

**Thomas J. Peer, M.D.** Illinois, 1872, of Ontario, N. Y., died suddenly in Rochester, N. Y., October 13, from heart disease, aged 63.

**James E. Smith, M.D.** Medical College of Ohio, Cincinnati, 1870, died at his home in Mauston, Wis., September 18, aged 57.

**Samuel J. Wallace, M.D.** Jefferson Medical College, Philadelphia, 1881, died at his home in Castine, Maine, September 28.

**William Robinson, M.D.** University of Buffalo (N. Y.) Medical Department, 1862, died at his home in Chicago, October 10

**William H. Owsley, M.D.** Examination Oklahoma, 1894, died at his home near Lexington, Okla., October 2, aged 60.

**Ira D. Moser, M.D.** Jefferson Medical College, 1880, of Philadelphia, died suddenly in Reading, Pa., October 21.

## Book Notices

A TREATISE ON THE NERVOUS DISEASES OF CHILDREN. For Physicians and Students. By B. Sachs, M.D. Second Edition. Cloth. Pp. 571. Price, $4.00. New York: Wm. Wood & Co.

The second edition of this work is 95 pages shorter than the edition of ten years ago, due to omission of the two chapters in the former edition on the anatomy and physiology of the spinal cord and the brain. The bibliographies and many detailed case reports are also omitted. A comparison of the texts of the chapters on hysteria, chorea and Pott's paralysis showed no significant changes. The chapter on insanity also is nearly the same as before, the former classification on mental disorders being retained in preference to that of Kraepelin.

A TEXT-BOOK OF MEDICAL PRACTICE for Practitioners and Students. Edited by W. Bain, M.D. With Illustrations. Cloth. Pp. 1011. Price, $7.00 net. New York: Longmans, Green & Co. 1904.

The special feature of this text-book, which is a very commendable one, is the insertion of short articles on the anatomy, physiology and histology of the organ as a preface to the discussion of its diseased conditions. This is convenient and helpful to the practitioner and student who have finished with a study of their anatomy proper. These prefaces include a synopsis of the salient points on the anatomy, histology and physiology of the organ, such as the kidney, heart, liver. This feature is a new departure in a text-book of this sort and one that might be adapted to advantage in others.

The last chapter includes a discussion on the "interrelations" of organs in disease. These relations of certain organs to one another are shown in some cases to rest on an anatomic basis; in other instances they are dependent on a physiologic cause, such as the common relation between ovary and mammary gland. In still other cases, a pathologic relationship is presented, such as the effects of a diseased kidney on the heart. The book presents a good arrangement and classification of the different subjects. The list of contributors includes some of the best known English authors.

THE EDINBURGH STEREOSCOPIC ATLAS OF ANATOMY. Prepared under the auspices of the Department of Anatomy of the University of Edinburgh, by Professor J. R. Cunningham, M.D. (Edin. et Dubl.), D.Sc., LL.D. (Glasg. et St. And.), D.C.L. (Oxon.) Edited by David Waterston, M.A., M.D., F.R.C.S.E., F.R.S.E., Lecturer Senior Demonstrator in the Department of Anatomy, Edinburgh University. Five sections, 250 stereographs: Section 1—Central Nervous System. Section 2—Thorax. Section 3—Abdomen and Pelvis. Section 4—Head and Neck. Section 5—Upper Limb: Lower Limb. Each section in a neat cloth case, titled on the back, suitable for placing in a bookcase. The complete set with stereoscope, $50. Sections 1 and 2 now ready. Imperial Publishing Co., No. 27 East 22d St., New York.

This consists of a stereoscope and 250 stereoscopic views of the various parts of the human body. The accuracy of the representations is guaranteed by the fact that they are photographs of representative specimens carefully dissected and labeled to show the various points of anatomy. Each view is on a card containing description. This series will be found of great value to any one who wishes to study anatomy and will be a valuable accessory to the manuals now in use in conjunction with work on the cadaver. The well-known clearness with which views of scenery are brought out by the stereoscope and the popularity of this instrument throughout the country makes it a little surprising that no adaptation of this principle to the study of the body has previously been made. The price of the set seems considerable, but the labor and expense required for its production is to be taken into consideration.

TEXT BOOK OF PHYSIOLOGICAL CHEMISTRY for Students of Medicine. J. H. Long, M.S., Sc.D. Cloth. Pp. 424. Price, $2.50. Philadelphia: P. Blakiston's Son & Co., 1905.

In writing this new text-book Professor Long's aim has been "to present a brief account of the important principles of physiologic chemistry in a form suitable for the use of medical students who may be assumed to have completed courses in general inorganic and organic chemistry." The ground is fully covered in four sections devoted to the chemistry of the nutritives, of ferments and digestive processes, of the blood, the tissues and secretions of the body, and of the end products of metabolism, excretions, and the energy balance. Besides the descriptive matter, explicit instructions are given for an abundance of well-chosen laboratory experiments from which a selection can readily be made so that the book may serve as a laboratory manual as well as a text-book. Himself an investigator and a contributor of many new results to the science of physiologic chemistry, it is not surprising to find that Professor Long has not only brought his book up to date in the matter of new discoveries and modern theories and methods, but that he has also succeeded in producing in every part of the work the altogether satisfying impression that physiologic chemistry is not a cut and dried science but a rapidly growing one, in which knowledge is daily being increased by observation and experiment, theories modified, abandoned and created, and in which particularly large gaps are still frankly left for the genius of investigation to fill. This spirit is bound to have the excellent effect that the student will know that his study of physiologic chemistry must not stop with the curriculum of a medical school, but must continue through his later career; the fair, conservative weighing of evidence, the critical, relentless attitude of the real scientist shown in the book, will prepare the student admirably for selecting maturely his own conclusions from his later readings in medical and chemical journals. It will also probably inspire him to wish to contribute in some measure himself by observation or experiment to the growing science. For the same reasons the present practitioner will find this new text-book a lucid guide through most of the recent developments in physiologic chemistry. Special chapters are devoted to an outline of the chemical phases of some of the recent theories of immunity as well as to important applications of the methods of physical chemistry to medical work, notably of cryoscopy and electrical conductivity. A thorough exposition is given of the most recent work and ideas concerning those important agents, the enzymes, and the rôle played by the physicochemical behavior of salts as electrolytes and of colloids as subject to electrical changes is touched on. Good paper, large, clear type and a very full index are some of the best mechanical features of the book. Few typographical errors were observed, the only two of any moment noted being in the chemical equations on pages 123 and 316.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON, Centenary 1805-1905. Written at the request of the President and Council by N. Moore, M.D., F.R.C.P., and S. Paget, F.R.C.S. Cloth. Pp. 337. Aberdeen University Press, Limited. 1905.

This is a history of what we believe is the oldest medical society in London, based on the recorded minutes of the society. Besides the usual matter, the minutes contained the titles and, in some instances, abstracts of the papers read, and the important ones are selected for mention. Among them will be found the most epoch-making papers of the past one hundred years. For during nearly all these years the Medico-Chirurgical Society of London has been one of the most important local societies in the world and has numbered among its members some of the well-known physicians and surgeons of England. Among those who were instrumental in its organization were: Abernethy, Atley, Cooper, Hunter, Edward Jenner, Bright, and others whose names are almost as familiar. It is interesting to read of the struggle, the self-sacrifice—both in time and money—that was required of the members on many occasions to keep the society up to the standard originally set for it. But it was kept up and, while the average attendance was seldom large, the work accomplished, as revealed by the minutes and especially by the transactions, was of the highest order and was probably excelled by no other medical society. There were some battles royal during the century, but none more virile than those in 1880-81 between Lawson Tait and his adherents on one side and Knowsley Thornton and Spencer Wells on the other on the then live question of Listerism. The following quotations from the minutes of the first meeting in 1881 make interesting reading after 25 years.

Mr. Thornton, at the first meeting of the year, presented to the society the tables of 172 antiseptic abdominal sections:

"The cases have all been treated on one common plan, viz., by Lister's method. When I say this, I mean by Lister's own method, to the exclusion of all so-called modified Listerism. They have nearly all been also treated by 'complete intraperitoneal ligature.' There is, I am afraid, a growing tendency to ascribe to Lister's method bad results, which should more properly be ascribed to imperfect knowledge of Lister's teaching, and to consequent imperfect application of his method. As a result of this imperfect knowledge and performance, we have endless varieties of so-called modified Listerism, the modification generally striking so deeply at the foundations of true Listerism that it is an absurdity to attempt to connect such methods with his, even in name. The fact that, by rigid adherence to the teachings of my old master, I have in one of the operations (ovariotomy) steadily improved my results, lowering my rate of mortality from 23.94 per cent. to 4 per cent., is to me a sufficient reward for resisting this craze for variety."

Sir Spencer Wells, February 22, presented 200 additional cases of ovariotomy, making 1,000 cases in all, and said:

"To my mind, one great merit of the antiseptic system is that it has made the intraperitoneal method, which was formerly the less, now the more successful method of dealing with the pedicle. Another great gain from the antiseptic system is that drainage of the peritoneal cavity is now scarcely ever necessary. My own experience has not only convinced me that by the use of antiseptics, especially of phenol, the success of ovariotomy has been remarkably increased, that a much smaller proportion of deaths to recoveries has been obtained; but, further, that those who have recovered have suffered much less from fever, while convalescence has been more rapid than it used to be."

The book will be found of interest to those who have a liking for medical history, to those who want to peer into the past, and to those who desire to come into direct contact, as it were, with the men who made English medicine.

PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, in Childhood and Early Life. By James Taylor, M.A., M.D., F.R.C.P. Cloth. Pp. 512. Price, $4.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

In his preface the author says that this book "is, in effect, an expression of personal opinions, the result of the writer's observations, modified and extended by his knowledge of the views of others, on subjects which have interested him for a good many years, and in regard to which he had the good fortune to have special opportunities of acquiring experience." It certainly is written from the standpoint of the writer. Apparently, he has treated the different diseases at a length proportioned to his interest in them, and the same is true of the different parts of the several subjects. Had he kept the reader and his needs more in mind the book might be much more valuable. The matter of treatment in detail seems to interest the author but little, even in such diseases as chorea and epilepsy, and consequently, throughout the work receives rather cursory and perfunctory attention. As further evidence of this personal bias may be mentioned the paltry three pages devoted to epidemic cerebrospinal meningitis, and nine pages on convulsions in childhood, while syringomyelia receives eighteen pages. There is a chapter on stammering, in which the physiology of this disorder is treated, but in a way beyond criticism, but as to putting the reader in a position to treat a single case—the entire chapter might just as well have been omitted.

Some parts of the book are exceedingly good. The chapter on intracranial tumors is more than good; it is exceptionally fine. There are sixty-three pages of it; it is eminently practical and full of information. It will be helpful alike to student, general practitioner, pediatrist, surgeon and neurologist. The subjects of infantile hemiplegia and cerebral diplegia are very well done, anterior poliomyelitis (infantile paralysis) receives adequate attention, and the chapters on Friedreich's ataxia, muscular dystrophy and epilepsy are good. Many of the short chapters on less familiar diseases will be useful to student and practitioner. Among these may be mentioned posterior basic meningitis, amaurotic family idiocy, achondroplasia, hemicrania and third nerve paralysis (migraine ophthalmoplegique), hereditary optic atrophy and family periodic paralysis. Why the author should omit serous meningitis he alone knows. To write somewhat at length on juvenile general paralysis, cretinism and mongolian imbecility and say no word of dementia præcox, seems unusual. Three or four pages are given over to "functional paraplegia," which seems to have greatly mystified the author, but in the entire book there is nothing at all about hysterical paralysis. Nor has the reviewer been able to find anything on the paralysis of multiple neuritis in children, although the disease is far from rare. Laryngismus stridulus is surely a nervous disease of childhood, but it is quite overlooked.

In short, the book is useful, but of most unequal value. It will serve well as an adjunct to other books. In it the searcher is liable to find that for which he hunts and likely to find it not. It is too good to be ignored, not good enough to set great store by. The pediatrist and neurologist will want it, and the general practitioner who is a student can use it to advantage.

TEXT-BOOK OF PHYSIOLOGY, Normal and Pathological, for Students and Practitioners of Medicine. W. S. Hall, Ph.D. Second edition Revised and enlarged; 340 engravings and Three Colored Plates. Cloth. Pp. 795. Price, $4.00 net. Philadelphia: Lea Brothers & Co. 1905.

The principal, older, well-established facts of physiology, especially physical, are concisely and clearly stated in Professor Hall's book, but we are surprised to find that practically no mention is made of recent work concerning the rôle of physico-chemical factors in fundamental physiologic processes. Whatever the reason may be, this omission weakens the value of the book, because it fails to give the student any adequate indication of the direction in which physiology is growing at present. The newer knowledge of the normal protective powers of the blood against infection, of its solvent action on alien corpuscles, and other normal properties of this kind are not considered. Throughout the book great stress is placed on morphologic considerations. The chapter on reproduction, for example, is principally descriptive in its character; it might answer very well for a book on embryology, but the underlying causes of the various phenomena described, or the present theories of those causes, are not discussed. The chapters on digestion and metabolism give a clear statement of the many complex processes, chemical and physical, that here come into play. "The most notable additions to the work are the sub-chapters on 'Pathologic Physiology.' It is becoming apparent to medical educators that to master normal physiology alone without applying its laws to the symptomatology of disease is to miss a large part of the service which physiology should render, just as the mastery of structural or morphologic pathology without an understanding of the modification which structural changes induce in the functions, implies the loss of a large part of the advantage which the study of pathology should give to the student and practitioner of medicine. The author has attempted to cover this most important field." According to this extract from the preface, one would naturally look for carefully digested discussion of certain phases of true pathologic physiology, but instead we find inserted brief synopses mostly from the pens of instructors in different laboratories of the pathology (meaning pathologic anatomy), symptomatology and physiology of some of the principal diseases of the most important systems of organs. Some of these synopses are accompanied with rather loosely constructed bibliographic lists. The synopses are in reality condensed statements and tabulations of matter presented fully in books dealing with medicine and surgery, and their introduction here hardly warrants the title of the book, "A Text-Book of Normal and Pathological Physiology." In a book described by this title we expect to find discussions of general pathologico-physiologic problems, and we trust that in coming editions Professor Hall will take a broader and more general view of the important subject of pathologic physiology. By so doing we believe he will promote the services of physiology to practical medicine more successfully than by the present method, which in reality only touches on special points in pathologic physiology. Large bodies of facts are not handled and discussed in such a way that any general deductions can

be drawn and general laws formulated. In spite of the shortcomings here outlined, many teachers of physiology will be grateful for having within easy reach so much of the physiologic knowledge considered essential to medical education.

## Miscellany

**To Disguise Taste of Quinin.**—Yvon writes to the *Gaz. des Hôp.* to the effect that a mixture of fat prevents the saliva from dissolving quinin and thus disguises its taste in the mouth. He mixes from 15 to 20 per cent. olive or vaselin oil with the quinin after dissolving the oil in ether. The mixture is then flavored with peppermint or some other aromatic oil; the ether is allowed to evaporate, and the mixture is taken with water or some other fluid.

**Clips in Appendix.**—Potherat reported to the French Société de Chirurgie the finding of two Michel clips in the appendix in a case of perforating appendicitis. These little clips (*agrafes*), are being extensively used to hold wound edges together, to help in suturing or to take the place of a suture. In the present case they had been used in a preceding operation on this patient for the removal of an ovarian cyst. It was not explained how the clamps had reached the appendix.

**Milk Diet in Scarlet Fever to Prevent Nephritis.**—Ziegler states that he has not had a single case of nephritis during the last twenty-one years among 231 children with scarlet fever whom he kept on an exclusive milk diet. Before he made this the rule he encountered nephritis in fully half of all his cases of scarlet fever. During this period also he observed 9 cases of nephritis among 10 children who were not put on the milk diet. His communication was originally published in the *Cbl. f. Kinderheilkunde* last May.

**Collodion When a Nail Is Being Thrown Off.**—The painfulness of the loss of a nail can be prevented by applying collodion to the spot. It holds the old nail firmly in place and protects the new nail tissue that is forming, while it does not interfere with the growth of the latter. The *Corr.-bl. f. Schweiz. Aerzte* for October 1 cites Porosz to the above effect, adding his warning that the collodion must not be applied to the skin, but merely to the bed of the nail.

**Circumcision of Mohammedan Children.**—The Constantinople correspondent of the *Lancet* states that one of the curious acts of benevolence which the Sultan exercises on festive occasions is the circumcision of poor Mohammedan children at the expense of his private purse. Recently about 3,000 children were thus circumcised at the Hamidié Hospital. Every one of them received also, after the performance of the religious operation, presents from the Sultan. The operation was performed by twenty medical men in co-operation with the hodjas of the Islam. The usual age at which Mohammedan children are circumcised is 13 years, but this varies greatly according to circumstances. It very frequently happens that Mussulmans are subjected to the religious operation at the age of 20 years and even later.

**Swallowing Lint After Sharp Foreign Bodies.**—A Russian confrère, N. Otcheredin, writes to the *Vratchebnaya Gazeta*, for September 3, that he succeeded in promoting the passage and safe evacuation without apparent injury of two sharp tacks swallowed by a lad of 9. He fed the boy with a thick potato gruel made with milk into which he stirred a large quantity of fresh lint from a clean rag. The child was brought to him about fifteen minutes after the tacks had been swallowed, and about a glass and a quarter of this potato and lint puree were ingested. Six hours later he was given two tablespoonfuls of castor oil. The two tacks enveloped in lint were found in his stool the same evening. In this country slippery elm bark has been used with success. The lint is a valuable idea, especially for young children.

**Exanthem a Natural Revulsion.**—Einisse writes to the *Vratchebnaya Gazeta* of August 13 to suggest that the exanthem of the eruptive fevers, etc., may be merely a means of revulsion adopted by nature. The eruption should be promoted in every way to favor hyperemia of the skin. He has found the best measure for the purpose is to wrap the patient in a blanket after a warm bath. In two cases of erythema nodosum he noted that the intense painfulness of the joints subsided as the eruption of an intercurrent scarlet fever developed. The symptoms in another patient simulated those of appendicitis, but they all vanished as a measles eruption appeared. The benefit from an intercurrent eruptive affection in certain diseases is a familiar fact, and is probably the result of the exanthem which nature uses as a revulsive measure.

## Queries and Minor Notes

### PHYSICIANS' CARDS IN NEWSPAPERS.

Here is another amusing card to add to those already reproduced in these columns. We have substituted other names for the real ones.

**DR. J. MARK DOE,**
**Physician and Surgeon.**

*Office at Four Corners.* *Open Day and Night.*
Medicines, Fruit and Candy,
Notions and Sundries.
Soft Drinks, Canned Goods
and Lunch, etc.

**Sherington,** **Daconsota.**

This appeared in a weekly paper in a small inland hamlet in one of the northern states. The population of the place is perhaps not sufficient to support a physician, a druggist, a confectioner, a dry-goods merchant, a grocer and a restauranteur separately.

### MEDICAL RECIPROCITY.

Dr. N. K., after reading the letter from Dr. Aronson, in THE JOURNAL, October 21, p. 1261, was reminded of a case in which reciprocity was strongly indicated, but was not forthcoming, and which, in his opinion, shows how unjust are the laws under which some medical examining boards have to operate. The candidate, aged 49, has been an honorable practitioner of medicine for the last twenty-seven years, is a graduate of two prominent medical schools, has been in continued practice since graduation, and, although his time was very much taken up "relieving suffering and prolonging life," he found enough time to keep up with the times by reading good medical journals and standard text-books, etc. In order to regain his lost health, due to long years of country practice, he decided to change climate, and went to a certain western state that requires an examination, or will reciprocate with certain other states, p oviding the candidate has a certificate "by examination" from one of these states. This candidate prepared for the examination for three months. During this time he practiced under a temporary certificate, but to his sorrow, after the examination, learned that he, like the fair flower, had been "plucked." This means three more months of hard work, and should he fail again, a move to another, perhaps more merciful, state. Of the recent graduate, who should, and easily can, pass examinations, this board requires none, providing the candidate once took an examination before a board reciprocating with this one. As examinations in nearly all states are recent requirements, it gives the old man, who has devoted his life to others, the "double cross." In other words, concludes our correspondent, the one of whom he writes was careless in the selection of his parents; he was born too soon.

### DISPOSAL OF WASTE.

——— ILL., Oct. 20, 1905.

*To the Editor:*—Can you advise me of sources of information on the disposal of garbage and other refuse matter, incinerators, etc.? S. C.

ANSWER.—The results of American experience are embodied in the reports and papers of the American Public Health Association during the last few years. The "Report of the Committee on Disposal of Garbage and Refuse" in 1897-98 and that in 1902 are especially valuable. In the "Proceedings of the Twenty-ninth Annual Meeting of the American Public Health Association (Buffalo, 1901), are two important papers on refuse disposal in the District of Columbia and in Boston. For publications of this body, if not accessible in libraries within reach, address the secretary, Dr. Charles O. Probst, Columbus, Ohio. Reference may also be made to a paper on "Incineration and Cremation of Waste," in *Municipal News* (Municipal News Assoc., 309 Broadway, New York), Sept. 25, 1905, in which statements are made concerning the present methods of garbage disposal in a number of American cities.

# State Boards of Registration

## COMING EXAMINATIONS.

Nebraska State Board of Health, State House, Lincoln, November 8-9. Secretary, George H. Brash, Beatrice.

Board of Registration in Medicine of Massachusetts, State House, Boston, November 14-15. Secretary, E. B. Harvey, Boston.

Connecticut Medical Examining Board, City Hall, New Haven, November 14-15. Secretary, Charles A. Tuttle, New Haven.

State Board of Health of Louisiana, New Orleans, November 14-15. Secretary, F. A. Larue, New Orleans.

State Board of Health of West Virginia, Clarksburg, November 14-16. Secretary, H. A. Barbee, Pt. Pleasant.

**New Louisiana Examination Dates.**—The fall examination of the Louisiana State Board of Medical Examiners did not take place on October 20 to 21, as had been announced, but was postponed because of quarantine regulations. November 14 and 15 are the new dates set.

**Arkansas October Report.**—Dr. J. P. Runyan, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Oct. 10, 1905. The number of subjects examined in was 7; total number of questions asked, 60; percentage required to pass, 75. The total number of candidates examined was 14, of whom 7 passed, including an undergraduate, and 7 failed. Representatives of the following colleges passed:

| College. PASSED. | Year. Grad. | Per Cent. |
|---|---|---|
| University of Missouri | (1904) | 81.8 |
| Chattanooga Med. Coll. | (1905) | 82.8 |
| St. Louis University | (1905) | 80 |
| University of Arkansas (undergraduate) | | 80 |
| Tulane University | (1873) | 84 |
| College of P. and S., Atlanta | (1905) | 81.7 |
| University of Tennessee | (1901) | 75 |

A graduate of the University of Arkansas (1886) and one of the Memphis Hospital Medical College (1895) were granted license to practice under the old registration law.

**Minnesota October Report.**—Dr. C. J. Ringnell, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, Oct. 3-5, 1905. The number of subjects examined in was 12; total number of questions asked, 95; percentage required to pass, 75. The total number of candidates examined was 25, of whom 14 passed and 11 failed. Representatives of the following colleges passed:

| College. PASSED. | Year. Grad. | Per Cent. |
|---|---|---|
| University of Minnesota | (1905) | 78.5 |
| Northwestern University, (1903) 82.4; (1904) 81; | (1905) | 75.1 |
| McGill University | (1904) | 79.2 |
| College of P. and S., Chicago | (1898) 75.4; (1902) | 76.2 |
| Rush Med. Coll. | (1896) 80.1; (1903) 82.6; (1905) | 79.8 |
| Western Med. Coll., Ontario | (1905) | 86.4 |
| Hahnemann Med. Coll., Chicago | (1904) | 75.3 |
| Hahnemann Med. Coll., Philadelphia | (1886) | 75 |
| George Washington Univ., Washington, D. C. | (1905) | 79.4 |

**Rhode Island October Report.**—Dr. G. T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, Oct. 5-6, 1905. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 19, of whom 12 passed and 7 failed. Representatives of the following colleges passed:

| College. PASSED. | Year. Grad. | Per Cent. |
|---|---|---|
| Baltimore Med. Coll. | (1905) | 75 |
| College of P. and S. Baltimore | (1905) | 83.9, 84.2 |
| College of P. and S. Boston | (——) | 75 |
| Harvard University | (1904) | 87.1 |
| Jefferson Med. Coll. | (1905) | 79.5 |
| Laval University | (1905) | 75.4, 75.6 |
| Medico-Chirurgical College, Philadelphia | (1905) | 76.5 |
| New York Homeopathic Med. Coll. | (1894) | 78.7 |
| University of Vermont | (1898) 82.4; (1903) | 75 |

# The Public Service

## Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending October 28.

Johnson, Richard W., surgeon, ordered, as additional duty to take charge of office of chief surgeon, Department of the Missouri, temporarily.

Munson, Edward L., asst.-surgeon, left Washington, D. C., on leave of absen e for two months.

McAndrew, Patrick H., asst.-surgeon, granted leave of absence for one month.

Owen, William O., surgeon, ordered to San Francisco, Cal., for examination by army retiring board.

Carter, W. Fitzhugh, surgeon, ordered from San Francisco, Cal., to Fort Monroe, Va., for duty.

Rafferty, Ogden, surgeon, ordered from Fort Monroe, Va., to San Juan, P. R., for duty.

Lippitt, William F., surgeon, ordered from San Juan, P. R., to Fort Assinniboine, Mont., for duty.

Eastman, William R., asst.-surgon, ordered from San Francisco, Cal., to Army General Hospital, Presidio, San Francisco, Cal., for duty.

Noble, Robert E., asst.-surgeon, ordered from Army General Hospital, Presidio, San Francisco, Cal., to the Depot of Recruits and Casuals, Angel Island, Cal., for duty.

Banister, William R., surgeon, returned to Jefferson Barracks, Mo., from leave of absence.

Glennan, James D., surgeon, returned to Fort Myer, Va., from leave of absence.

Quinton, William W., asst. surgeon, left Fort Barrancas, Fla., for his proper station, Fort McPherson, Ga.

Devereux, John R., asst.-surgeon, returned to Fort Logan, Colo., from leave of absence.

Boyer, Perry L., asst.-surgeon, leave of absence extended two months.

Woodbury, Frank T., asst.-surgeon, left New York, N. Y., for San Francisco, Cal., en route to Philippine service.

Vose, William E., asst.-surgeon, left Fort Sheridan, Ill., for San Francisco, Cal., en route to Philippine service.

DeLoffre, Samuel M., asst. surgeon, relieved from duty at Fort Schuyler, N. Y., to proceed to San Francisco, Cal., for Philippine service.

Dale, Frederick A., asst.-surgeon, arrived at Fort Walla Walla, Washington, for duty.

Shortlidge, Edmund D., asst.-surgeon, left Wilmington, Del., for San Francisco, Cal., en route to Philippine service.

Edger, Benjamin J., Jr., asst.-surgeon, left Fort Brown, Texas, on leave of absence for four months.

Bourke, James, asst.-surgeon, relieved from temporary duty at Fort Howard, Md., and returned to Medical Supply Depot, New York City, N. Y.

Reagles, James, contract surgeon, leave of absence extended twenty days.

Sievers, Robert E., contract surgeon, granted leave of absence for three months.

Parkman, Wallace E., contract surgeon, granted leave of absence for one month.

Rebert, M. A., contract surgeon, ordered from Fort Totten, N. Y., to Fort Schuyler, N. Y., for temporary duty.

de Quevedo, Luis G., contract surgeon, returned to San Juan, P. R., from temporary duty at Henry Barracks.

McAlister, John A., dental surgeon, granted leave of absence for two months.

Newlove, George, contract surgeon, granted an extension of one month to his leave of absence.

Warwick, Clarence A., contract surgeon, relieved from duty in the Philippines Division, and ordered to duty at Fort Mott, N. J.

Sparrenberger, Frederick H., contract surgeon, relieved from duty at Fort Mott, N. J., and ordered to Fort Washakie, Wyo., for duty.

Kuhn, Charles F., contract surgeon, relieved from duty in the Philippines Division and ordered to Fort Lawton, Wash., for duty.

Purnell, Julius M., contract surgeon, relieved from duty in the Philippines Division, and ordered to duty in the Department of California.

Wythe, Stephen, contract surgeon, relieved from duty in the Department of California, and ordered to the Philippines Division for duty.

Stuckey, Harrison W., contract surgeon, arrived at Fort Snelling, Minn., for duty.

Cass, William E., contract surgeon, arrived at Fort Stevens, Oregon, for temporary duty.

Kellogg, Preston S., contract surgeon, ordered from San Francisco, Cal., to his home at Battle Creek, Mich., for annulment of contract.

Dade, Walter H., contract surgeon, left Fort Du Chesne, Utah, for duty at Fort D. A. Russell, Wyo.

Clayton, George R., contract surgeon, left Columbus Barracks, Ohio, for San Francisco, Cal., en route to Philippine service.

## Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending October 28:

Stepp, J., P. A. surgeon, ordered to the *Southery*, and to additional duty at the navy yard, Portsmouth, N. H.

Dabney, V., acting asst.-surgeon, detached from the *Southery*, ordered home and resignation as acting assistant surgeon accepted, to take effect November 6.

Law, H. L., surgeon, retired, ordered to the naval recruiting rendezvous, Boston, November 3.

## Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending October 25:

Vaughan, George T., assistant surgeon-general, granted leave of absence for three days from October 25.

Sawtelle, H. W., surgeon, granted leave of absence for one month from October 23.

Stoner, G. W., surgeon, granted leave of absence for 12 days from October 18, under the provisions of paragraph 189 of the regulations.

Wickes, H. W., P. A. surgeon, granted two days leave of absence from October 26.

Anderson, J. F., P. A. surgeon, granted leave of absence for one month from November 1.

Robertson, H. McG., asst.-surgeon, granted leave of absence for six days from October 23.

Hunt, Reid, chief, division of pharmacology, Hygienic Laboratory, granted leave of absence for six days from October 23.

Addis, W. E., acting asst. surgeon, granted leave of abbsence for seven days.

Lyall, R., acting asst.-surgeon, granted leave of absence for four days.

Hall, R. F., acting asst.-surgeon, granted leave of absence for seven days.

Goodman, F. S., pharmacist, relieved from special temporary duty at New Orleans and Patterson, La., and directed to rejoin station at Norfolk, Va.

Watters, M. H., pharmacist, relieved from duty in Bureau at Washington, and directed to proceed to Chicago, reporting to the medical officer in command for duty and assignment to quarters.

# Society Proceedings

## COMING MEETINGS.

American Academy of Medicine, Chicago, November 7-8.
Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.
American Dermatological Association, New York, Dec. 28-30.
Western Surgical and Gynecological Association, Kansas City Mo., Dec. 27-28.

## KENTUCKY STATE MEDICAL ASSOCIATION.

*Fifty-fifth Annual Meeting, held at Louisville, Oct. 18-20, 1905.*

The President, DR. F. H. CLARKE, Lexington, in the Chair.

### Election of Officers.

The following officers were elected for the ensuing year: President, Dr. C. Z. Aud, Cecilia; vice-presidents, Drs. Murison Dunn, Richmond; R. M. Coleman, Paducah, and J. M. Salman, Ashland; secretary, Dr. James B. Bullitt, Louisville; treasurer, Dr. W. B. McClure, Lexington; orator in medicine, Dr. W. A. Jenkins, Louisville; orator in surgery, Dr. W. O. Bullock, Lexington; delegate to the American Medical Association, Dr. J. Garland Sherrill, Louisville.

Owensboro was selected as the next place of meeting.

### Council on Pharmacy and Chemistry Approved.

On motion of Dr. A. T. McCormack, Bowling Green, the association pledged to the Council on Pharmacy and Chemistry of the American Medical Association its most earnest support in the work the council is doing.

On motion of Dr. C. M. Pope, the house of delegates was instructed to extend a vote of thanks to the various lay journals who are making a fight against the patent medicine evil, and tendering them the support of the association.

DR. W. B. MCCLURE, Lexington, introduced a resolution indorsing the name of Dr. Ephraim McDowell for a place in Statuary Hall in Washington.

DR. J. M. MATHEWS, Louisville, introduced the following resolution, which was adopted:

WHEREAS, The Honorable John W. Yerkes, commissioner of internal revenue for the United States Government, has recently promulgated and is now enforcing an order that all patent medicines containing over a certain per cent. of alcohol shall be held unsaleable unless the dealer takes out a retail liquor license,

*Therefore*, Be it resolved that the Kentucky State Medical Association endorse and commend this action of the commissioner of internal revenue.

### Relation of the Physician to the Community.

DR. CLARKE, in his president's address, spoke of organization in general and referred particularly to the importance of the organization movement carried on by the American Medical Association and the beneficial effect of that movement on the progress of medicine as a science. Among other topics discussed by Dr. Clarke were the relation of the physician to his community as a teacher of sanitation; hygiene and the prevention of disease; the regulation of medical registration; the suppression of the irregular practitioner; the sale of patent medicines; the management of charitable institutions; state provision for the care of epileptics and the treatment of inebriates, and the building of hospitals by the state for the treatment of consumptives.

### Laboratory Methods.

DR. J. F. MCCLYMONDS, Lexington, chose for his topic for the oration in medicine, "The Relation of Laboratory Methods to Medicine." He reviewed the history of the epoch-making discoveries in medicine, such as the demonstration of bacteria and their relation to disease; the discovery of the stethoscope; the development of chemistry and its relation to medicine; the development of pathology and bacteriology; the relation to disease of animal parasites; the serum diagnosis of disease, and the value of laboratory examination in the diagnosis of such diseases as anemia, chlorosis, tuberculosis, diphtheria, typhoid fever, malaria, etc., and the invention of the compound microscope. He said that to the initiated the laboratory is a blessing; to the uninitiated it is a curse.

### Surgery of Gastric Ulcer.

DR. LOUIS FRANK, Louisville, in the oration on surgery, discussed the present status of gastric surgery with special reference to ulcer. He suggested early exploratory incision in doubtful cases where there is any suspicion of cancer, even when the laboratory diagnosis is negative. There is a time in the treatment of gastric ulcer when the surgeon must be called. Gastroenterostomy should be the operation of choice. The safest course is to secure all bleeding points and then to do the gastroenterostomy. He discussed the indications for surgical treatment, the treatment of gastrectasis and the ineffectiveness of medicinal measures. He scouted the value of test breakfasts and stomach washings in the diagnosis of gastric cancer.

### Postpartum Infections.

DR. EDWARD SPEIDEL, Louisville, advocated the wearing of sterilized rubber gloves during the delivery of the patient, the administration of quinin to combat malarial infection, the stimulation of the hepatic function by means of intestinal flushing, and the use of vaginal douches after delivery. He said that neither the sharp nor the dull curette should be used in the parturient uterus. If curettage is indicated the finger is best for the purpose. If infection occurs and it extends beyond the uterus, its spread should be limited by following out the Ochsner treatment for appendicitis. Speidel also uses nuclein solution hypodermically, giving one ounce daily, and twice daily per rectum, seven and one-half grains of chloral dissolved in two ounces of water. Hysterectomy, he said, is indicated only when the infection is confined to the uterus.

### Unique Case of Extrauterine Pregnancy.

DR. J. R. MORRISON, Louisville, reported a case in which rupture evidently occurred at about the fourth month, the fetus becoming encysted. The patient had severe pains for about five months afterward. A diagnosis was made of fibroid of the uterus and a laparotomy was performed. However, the tumor was found to be so adherent, and the patient's condition was so poor that the operation was not concluded. The laparotomy wound did not heal up entirely, and two years later there were discharged through the wound the bones of a fetal skeleton of about four months' development.

### College Education Preparatory to Medicine.

DR. J. W. PRYOR, Lexington, described the course leading to the degree of B.S. given by the State College of Kentucky, the last two years of this course being really preparatory to the study of medicine, and advocated such a preparation for all prospective students of medicine.

### The Irregular Regular.

DR. G. E. DAVIS, Lawrenceburg, spoke of graft of all kinds, especially medical graft, the profession of getting hurt, the division of fees, and the various subterfuges resorted to by some medical men to acquire a practice. He suggested that the organized profession bring such influence to bear on the public press that it will fight quackery and expose the methods of quacks.

### Causes of Gastric Ulcer.

DR. CHARLES G. LUCAS, Louisville, advised that careful attention be paid to all cases where an injury to the epigastrium was sustained or where anemia develops. A blood examination should also be made as well as an estimation of the HCl content of the gastric juice.

### Diagnosis and Treatment of Gastric Ulcer.

DR. S. E. WOODY, Louisville, discussed the differential diagnosis of cancer, ulcer, gastritis, vomiting of pregnancy, etc. He divided the treatment into five stages: 1, The treatment of urgent symptoms; 2, functional rest of stomach; 3, bland diet; 4, proper medicinal treatment to produce healing of the ulcer, and 5, these failing, surgery.

### Capillary Bronchitis in Infants.

DR. R. B. GILBERT, Louisville, called attention to the fact that in this condition it is important to treat the accompanying intestinal fermentation. He uses saline injections consisting of one heaping teaspoonful of ordinary salt in a pint of water, no medicine being given by mouth, so as to give the stomach complete functional rest. Locally he applies to the chest an ointment consisting of twenty grains of menthol to the ounce of vaselin.

### The Tuberculosis Problem in the South.

Dr. Dunning S. Wilson, Louisville, cited statistics showing that in Kentucky, West Virginia and Tennessee the death rate from pulmonary tuberculosis is over 13 per cent. In Virginia, North Carolina and South Carolina it is over 11 per cent., while in Georgia, Alabama, Mississippi and Louisiana it is over 9 per cent. In Arkansas and Texas the death rate is over 7 per cent., and in Florida it is less than 7 per cent. The average death rate for all these states is 11.2 per cent. In the states having the largest negro population the mortality from tuberculosis is less than in states in which fewer negroes live. In states having cities of large size the mortality is greater than in those states where the population is confined to smaller towns. In Kentucky over 16 per cent live in towns of 8,000 and over. The percentage of deaths from tuberculosis among this number is 14.56 per cent., only 13 per cent. of the population being colored. In Louisiana 47.2 per cent. of the population is colored. Twenty-two per cent. of the entire population lives in cities of over 8,000, with a death rate of only 9.62 per cent. for the state. Among the twelve largest cities New Orleans ranks highest in the death rate from tuberculosis. Wilson says that the negro is susceptible not because of an inherited tendency, but because of his mode of living. An analysis of the figures cited shows that the negroes do not influence unfavorably the death rate from tuberculosis, as is generally supposed; the states having the largest negro population have the lowest mortality. He believes that tuberculosis is curable in any climate, providing proper attention is paid to rest, food and the breathing of fresh air. These patients should be given every care so that they will not be a menace to society, but they should not be considered as pariahs.

The following papers were also read: "Prevention and Treatment of Postpartum Infections," by Dr. Basil M. Taylor, Greensburg; "Rupture of the Uterus," by N. M. Garrett, Frankfort; "The Care of Breast and Nipple During Pregnancy and Puerperium," by Dr. R. N. Coleman, Lexington; "Pleurisy," by J. B. Jackson, Danville; "Infection and Contagion," by W. A. Jenkins, Louisville; "Practical Significance of Arterial Tension," by Dr. J. A. Flexner, Louisville;; "Acute Infantile Summer Diarrhea," by Dr. S. J. Harris, Philpot; "Gas Bacillus Infection," by Dr. R. L. Ireland, Louisville; "Nature and Causes of Rheumatism," by Dr. John G. Cecil, Louisville; "Complications of Rheumatism," by Dr. H. E. McKay, Bardstown; "Dionin in Diseases of the Eye," by Dr. S. G. Dabney, Louisville.

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## ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

*Fourteenth Annual Meeting, held in Detroit, Sept. 26-28, 1905.*

(*Continued from Page 1355.*)

### Unification of the Duties of Medical Officers.

Surgeon Charles S. Stokes, U. S. Navy, made a plea for the unification of the duties of medical officers of the army and navy, including the national guard and the naval militia. He said that the basis of existence was the same in all branches of the service and that the preliminary requirements were identical. He suggested service school instruction along the same lines, modified only to meet the variations dependent on service afloat or service ashore. He considered that the aims, personnel and material, as far as possible, should be the same. He urged the encouragement of healthful rivalry between the various branches of the service and especially the cultivation of an *esprit de corps*. He considered one of the chief values of the association the bringing together of surgeons of all branches of the service to discuss on an equal footing matters of interest to all. The training and drilling of enlisted men in the working details of military hygiene and first-aid methods he considered the most important problem to be solved by military surgeons and advocated the education of line officers in this regard. To establish a basis for work which would be applicable to all branches of the service, he advised the establishment of a joint board which should formulate the details of the plan of instruction in hygiene, first-aid, etc.

### New Suture Materials.

Col. N. Senn, surgeon-general of Illinois, informally called attention to surgeons' new suture materials which he had obtained on his recent trip to Greenland. He presented suture material made from the tendon of the whale, the walrus and the narwhal, and also presented a vegetable fiber from New Zealand, the use of which he advised for superficial sutures.

### In Manchuria with the Russians.

Col. Valery Havard, assistant surgeon-general, U. S. Army, who was detailed for duty with the Russian army in Manchuria, presented a detailed report of his experiences, in which he gave the ratio of killed to wounded in the Japanese army as 1 to 4.5 and in the Russian army as 1 to 3.96. The wounds from shrapnel comprised the greater majority as compared with those caused by bullets. He also stated that the wounds from bayonet and sword, weapons which have been generally considered obsolete, were still met with, and that before the battle of Mukden 500 Russians had been killed and wounded by the bayonet. The ratio of sick in the Russian army up to June 13, 1904, was 3.28 per cent. After the rainy season had set in, the ratio increased to 3.74 per cent., and on that date the number of cases of communicable disease was 1,117, including all cases of dysentery and diarrhea. At that time there were only 34 cases of typhoid fever, 15 of typhus fever and 9 of recurrent fever. On Dec. 8, 1904, there were in hospitals 819 officers and 17,384 soldiers. Two months later the number had increased to 873 officers and 17,892 soldiers.

The Russian statistics showed that during 1904 at least 20,000 Russians were killed in action or died from wounds, and that during the same period the number of deaths from disease was only 2,730, a ratio of about 7 to 1. He stated that in Manchuria epidemic diseases might have been expected to break out, but that, to his surprise, not only were such epidemics absent, but the usual camp diseases were not prevalent. The variation of percentage of infected wounds in summer and winter dependent on the condition of the skin and the amount of clothing worn by the soldiers was interesting. In Mukden hospitals hardly 10 per cent. of the wounds inflicted in summer were infected, while in winter hardly 10 per cent. of the wounds escaped infection, notwithstanding the primary dressings which had been applied in most cases. He concluded that the prophylactic measures preparatory to battle from a hygienic standpoint should be the taking of a bath, the donning of clean linen and a clean and light uniform, and that, although the soldier should be well fed, his intestines should be empty on the day of battle.

### Effects of Big Gun Firing.

Fleet Surgeon Lloyd Thomas, R. N., of the Naval Gunnery School, Portsmouth, England, described the effects incident to the firing of the naval guns of the present day at sea. In barbettes and turrets the occupants suffered at first a feeling of shock and, in addition, a tendency to nausea. The injuries to the ears resultant on big guns firing were rupture of the membrana tympani, or what he termed "gun deafness," the latter being a permanent deafness due to injury from repeated shocks on the internal ear. The pathology of this condition was not clear. Up to the present nothing had been found which would efficiently protect the ear from the concussions due to the firing of heavy guns. Cotton wool, or other substances, had been devised and used for plugging the external meatus. It had been shown experimentally that the intensity of sound was weakened by filling the irregularities of the auricle with wax, oil or vaselin, but neither officers nor crew took kindly to such artificial means.

### The Canteen.

Col. Jefferson D. Griffith, Kansas City, surgeon-general of Missouri, presented the following resolution, which was adopted:

Whereas, The abolition of the army canteen in the opinion of those best acquainted with the army, has resulted in the use of an increased amount of bad liquors, instead of light wines and beer as sold at the canteen by the soldiers, resulting in a marked increase in diseases tending to the demoralization of the soldier; and,

Whereas, It is found that the anti-canteen law adds to the number of saloons and brothels contiguous to garrisons, and as the result, the monthly stipends are spent outside altogether; and,

Whereas, No benefit whatsoever in any line has been the result of the abolition of the canteen; be it

*Resolved*, That this body in session do earnestly request the Secretary of War to use his every effort for the re-establishment of the canteen, assuring him of our hearty support in every manner.

### Examination of Recruits.

Major Charles Adams, Chicago, surgeon Illinois National

Guard, made a report of the result of examination of recruits for National Guard service, with especial reference to the period since the Spanish-American war, in which he detailed the findings of examining officers for the last seven years, the proportion of physical disabilities found and their nature. He stated the endeavor should be to conform as closely as practicable to the rules and forms for the examination of recruits in use in the regular establishment.

### Presentation of Insignia.

On the second day the insignia of the association was formally presented to the delegates from abroad, the presentation remarks being made by the secretary.

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## SECOND INTERNATIONAL SANITARY CONVENTION.

*Held at Washington, D. C., Oct. 9-14, 1905.*

*(Concluded from page 1348.)*

### Sanitary Agreement.

October 13 and 14 were entirely devoted to the consideration and adoption of the following agreement:

*The Presidents of the Republics of Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Mexico, Nicaragua, Peru, United States of America, and Venezuela:* Having found that it is useful and convenient to codify all the measures destined to guard the public health against the invasion and propagation of yellow fever, plague and cholera, have designated as their delegates:

[Here follow the names of the delegates.]

Who, having made an interchange of their powers, and found them good, have agreed to adopt, *ad referendum*, the following propositions:

### CHAPTER I.

REGULATIONS TO BE OBSERVED BY THE POWERS SIGNATORY TO THE CONVENTION AS SOON AS PLAGUE, CHOLERA, OR YELLOW FEVER MAY APPEAR IN THEIR TERRITORY.

*Section I.—Notification and subsequent communications to other countries.*

Article 1. Each government should immediately notify other governments of the first appearance in its territory of authentic cases of plague, cholera or yellow fever.

Article 2. This notification is to be accompanied, or very promptly followed, by the following additional information:

(1) The neighborhood where the disease has appeared.
(2) The date of its appearance, its origin, and its form.
(3) The number of established cases, and the number of deaths.
(4) For plague: The existence among rats or mice of plague, or of an unusual mortality. For yellow fever: The existence of *Stegomyia fasciata* in the locality.
(5) The measures taken immediately after the first appearance.

Article 3. The notification and the information prescribed in Articles 1 and 2 are to be addressed to diplomatic and consular agents in the capital of the infected country; but this is to be construed as not preventing direct communication between officials charged with the public health of the several countries.

For countries which are not thus represented, they are to be transmitted directly by telegraph to the governments of such countries.

Article 4. The notification and the information prescribed in Articles 1 and 2 are to be followed by further communications dispatched in a regular manner in order to keep the governments informed of the progress of the epidemic.

These communications, which are to be made at least once a week, and which are to be as complete as possible, should indicate in detail the precautions taken to prevent the extension of the disease.

They should set forth: First, the prophylactic measures taken relative to sanitary or medical inspection, to isolation and disinfection; Second, the measures taken relative to departing vessels to prevent the exportation of the disease, and, especially under the circumstances mentioned in paragraph 4 of Article 2 of this section, the measures taken against rats and mosquitoes.

Article 5. The prompt and faithful execution of the preceding provisions is of the very first importance.

The notifications only have a real value if each government is warned in time of cases of plague, cholera or yellow fever and of suspicious cases of those diseases supervening in its territory. It can not then be too strongly recommended to the various governments to make obligatory the declaration of cases of plague, cholera or yellow fever, and of giving information of all unusual mortality of rats and mice especially in ports.

Article 6. It is understood that neighboring countries reserve to themselves the right to make special arrangements with a view of organizing a service of direct information between the chiefs of administration on the frontiers.

*Section II. Conditions showing a given territorial area to be infected, or to have been freed from infection.*

Article 7. Information of a first case of plague, cholera or yellow fever does not justify against a territorial area where it may appear, the application of the measures prescribed in Chapter 2 as hereinafter indicated.

On the occurrence of several non-imported cases of plague, or a non-imported case of yellow fever or when cases of cholera form a focus, the area is to be declared infected.

Article 8. To limit the measures to the affected regions alone, governments should only apply them to persons and articles proceeding from the contaminated or infected areas.

By the word "area" is understood a well determined portion of territory described in the information which accompanies or follows notification, thus, a province, a state, "a government," a district, a department, a canton, an island, a communé, a city, a quarter of a city, a village, a port, a "polder," a hamlet, etc., whatever may be the extent and population of these portions of territory.

But this restriction, limited to the infected area, should only be accepted on the formal condition that the government of the infected country shall take the necessary measures: 1, to prevent, unless previously disinfected, the exportation of articles named in 1 and 2 of Article 12, coming from the contaminated area; and 2, measures to prevent the extension of the epidemic; and provided further that there be no doubt that the sanitary authorities of the infected country have faithfully complied with Article 1 of this convention.

When an area is infected, no restrictive measure is to be taken against departures from this area if these departures have occurred five days, at least, before the beginning of the epidemic.

Article 9. That an area should no longer be considered as infected, official proof must be furnished:

First, That there has been neither a death nor a new case of plague or cholera for five days after isolation,[1] death, or cure of the last plague or cholera case. In the case of yellow fever the period shall be eighteen days, but each government may reserve the right to extend this period.

Second, That all the measures of disinfection have been applied: in the case of plague, that the precautions against rats have been observed, and in the case of yellow fever that the measures against mosquitoes have been executed.

### CHAPTER II.

MEASURES OF DEFENSE BY OTHER COUNTRIES AGAINST TERRITORIES DECLARED TO BE INFECTED.

*Section I. Publication of prescribed measures.*

Article 10. The government of each country is obliged to immediately publish the measures which it believes necessary to take against departures either from a country or from infected territorial area.

The said government is to communicate at once this publication to the diplomatic or consular agent of the infected country residing in its capital as well as to the International Sanitary Bureau.

The government shall be equally obliged to make known through the same channels the revocation of these measures or modifications which may be made in them.

In default of a diplomatic or consular agency in the capital, communications are made directly to the government of the country interested.

*Section II. Merchandise—Disinfection—Importation and Transit—Baggage.*

Article 11. There exists no merchandise which is of itself capable of transmitting plague, cholera or yellow fever. It only becomes dangerous in case it is soiled by pestous or choleraic products, or, in the case of yellow fever, when such merchandise may harbor mosquitoes.

Article 12. No merchandise or objects shall be subjected to disinfection on account of yellow fever, but in cases covered by the previous article the vehicle of transportation may be subjected to fumigation to destroy mosquitoes. In the case of cholera and plague disinfection should only be applied to merchandise and objects which the local sanitary authority considers as infected.

Nevertheless, merchandise, or objects enumerated hereafter, may be subjected to disinfection, or prohibited entry, independently of all proof that they may or may not be infected:

1. Body linen, wearing apparel in use, clothing which has been worn, bedding already used.

When these objects are transported as baggage, or in the course of a change of residence (household furniture), they should not be prohibited, and are to be subjected to the regulations prescribed by Article 19.

Baggage left by soldiers and sailors, and returned to their country after death, are considered as objects comprised in the first paragraph of No. 1 of this article.

2. Rags, and rags for making paper, with the exception, as to cholera, of rags which are transported as merchandise in large quantities compressed in bales held together by hoops.

New clippings coming directly from spinning mills, weaving mills, manufactories or bleacheries, shoddy, and clippings of new paper should not be fordidden.

Article 13. In the case of cholera and plague there is no reason to forbid the transit through an infected district of merchandise, and the objects specified in Nos. 1 and 2 of the preceding Article, if they are so packed that they can not have been exposed to infection in transit.

In like manner, when merchandise or objects are so transported that, in transit, they can not come in contact with soiled objects, their transit across an infected territorial area should not be an obstacle to their entry into the country of destination.

Article 14. The entry of merchandise and objects specified in Nos. 1 and 2 of Article 12 should not be prohibited, if it can be shown to the authorities of the country of destination that they were shipped at least five days before the beginning of the epidemic.

Article 15. The method and place of disinfection, as well as the measures to be employed for the destruction of rats, and mosquitoes, are to be fixed by authority of the country destination, on arrival at said destination. These operations should be performed in such a manner as to cause the least possible injury to the merchandise.

It devolves on each country to determine questions relative to the payment of damages resulting from disinfection, or from the destruction of rats or mosquitoes.

If taxes are levied by a sanitary authority, either directly or through the agency of any company or agent, to insure measures for the destruction of rats and mosquitoes on board ships, the amount of these taxes ought to be fixed by a tariff published in advance, and the result of these measures should not be a source of profit for either state or sanitary authorities.

Article 16. Letters and correspondence, printed matter, books, newspapers, business papers, etc. (postal parcels not included), are not to be submitted to any restriction or disinfection. In case of yellow fever postal parcels are not to be subjected to any restrictions or disinfection.

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1. The word "isolation" signifies isolation of the patient, of the persons who care for him and the forbiding of visits of all other persons, the physician excepted. By isolation in the case of yellow fever is understood the isolation of the patient in an apartment so screened as to prevent the access of mosquitoes.

Article 17. Merchandise, arriving by land or by sea, should not be detained permanently at frontiers or in ports.

Measures which it is permissible to prescribe with respect to them are specified in Article 12.

Nevertheless, when merchandise, arriving by sea in bulk (vrac) or in defective packages, is contaminated by pest-stricken rats during the passage, and is incapable of being disinfected, the destruction of the germs may be assured by putting said merchandise in a warehouse for a period to be decided by the sanitary authorities of the port of arrival.

It is to be understood that the application of this last measure should not entail delay on any vessel nor extraordinary expenses resulting from the want of warehouses in ports.

Article 18. When merchandise has been disinfected by the application of the measures prescribed in Article 12, or put temporarily in warehouses in accordance with the third paragraph of Article 17, the owner, or his representative, has the right to demand from the sanitary authority which has ordered such disinfection, or storage, a certificate setting forth the measures taken.

Article 19. Baggage. In the case of soiled linen, bed clothing, clothing and objects forming a part of baggage or furniture coming from a territorial area declared contaminated, disinfection is only to be practiced in cases where the sanitary authority considers them as contaminated. There shall be no disinfection of baggage on account of yellow fever.

*Section III. Measures in ports and at maritime frontiers.*

Article 20. Classification of ships. A ship is considered as infected which has plague, cholera or yellow fever on board, or which has presented one or more cases of plague or cholera within seven days, or a case of yellow fever at any time during the voyage.

A ship is considered as suspected on board of which there have been a case or cases of plague or cholera at the time of departure or during the voyage, but no new case within seven days; also such ships as have lain in such proximity to the infected shore as to render them liable to the access of mosquitoes.

The ship is considered *indemne*, which, although coming from an infected port, has had neither death nor case of plague, cholera or yellow fever on board, either before departure, during the voyage, or at the time of arrival, and which in the case of yellow fever has not lain in such proximity to the shore, as to render it liable, in the opinion of the sanitary authorities, to the access of mosquitoes.

Article 21. Ships infected with plague are to be subjected to the following regulations:

1. Medical visit (inspection).
2. The sick are to be immediately disembarked and isolated.
3. Other persons should also be disembarked, if possible, and subjected to an observation,[2] which should not exceed five days dating from the day of arrival.
4. Soiled linen, personal effects in use, the belongings of crew[3] and passengers which, in the opinion of the sanitary authorities are considered as infected should be disinfected.
5. The parts of the ship which have been inhabited by those stricken with plague, and such others as, in the opinion of the sanitary authorities are considered as infected, should be disinfected.
6. The destruction of rats on shipboard should be effected before or after the discharge of cargo, as rapidly as possible, and in all cases with a maximum delay of forty-eight hours, care being taken to avoid damage of merchandise, the vessel and its machinery.

   For ships in ballast, this operation should be performed immediately before taking on cargo.

Article 22. Ships suspected of plague, are to be subjected to the measures which are indicated in Nos. 1, 4 and 5 of Article 21.

Further, the crew and passengers may be subjected to observation, which should not exceed five days, dating from the arrival of the ship. During the same time, the disembarkment of the crew may be forbidden, except for reasons of duty.

The destruction of rats on shipboard is recommended. This destruction is to be effected before or after the discharge of cargo, as quickly as possible, and in all cases with a maximum delay of forty-eight hours, taking care to avoid damage to merchandise, ships, and their machinery.

For ships in ballast, this operation should be done, if done at all, as early as possible, and in all cases before taking on cargo.

Article 23. Ships *indemne* from plague are to be admitted to free pratique immediately, whatever may be the nature of their bill of health.

The only regulation which the sanitary authorities at a port of arrival may prescribe for them consists of the following measures:

1. Medical visit (inspection).
2. Disinfection of soiled linen, articles of wearing apparel, and the other personal effects of the crew and passengers, but only in exceptional cases when the sanitary authorities have special reason to believe them infected.
3. Without demanding it as a general rule, the sanitary authorities may subject ships coming from an infected port to a process for the destruction of the rats on board before or after the discharge of cargo. This operation should be done as soon as possible, and in all cases should not last more than twenty-four hours, care being taken to avoid damaging merchandise, ships, and their machinery, and without interfering with the passing of passengers and crew between the ship and the shore. For ships in ballast, this procedure, if practiced, should be put in operation as soon as possible, and in all cases before taking on cargo.

   When a ship coming from an infected port has been subjected to a process for the destruction of rats, this process should only be repeated if the ship has touched meanwhile at an infected port, and has been alongside a quay in such port, or if the presence of sick or dead rats on board is proved.

   The crew and passengers may be subjected to a surveillance, which should not exceed five days, to be computed from the date when the ship sailed from the infected port. The landing of the crew may also, during the same time, be forbidden except for reasons of duty.

   Competent authority at the port of arrival may always demand, under oath, a certificate of the ship's physician, or in default of a physician, of the captain, setting forth that there has not been a case of plague on board since departure, and that no marked mortality among the rats has been observed.

Article 24. When on an *indemne* ship rats have been recognized as pest-stricken as a result of bacteriologic examination, or when a marked mortality has been established among these rodents, the following measures should be applied:

1. *Ships with plague-stricken rats:*

(*a*) Medical visit (inspection).

(*b*) Rats should be destroyed before or after the discharge of cargo, as rapidly as possible, and in all cases with a delay not to exceed forty eight hours; the deterioration of merchandise, vessels and machinery to be avoided. On ships in ballast, this operation should be performed as soon as possible, and in all cases before taking on cargo.

(*c*) Such parts of the ship and such articles as the local sanitary authority regards as infected, shall be disinfected.

(*d*) Passengers and crew may be submitted to observation, the duration of which should not exceed five days, dating from the day of arrival, except in special cases where the sanitary authority may prolong the observation to a maximum of ten days.

2. *Ships where a marked mortality among rats is observed:*

(*a*) Medical visit (inspection).

(*b*) An examination of rats, with a view to determining the existence of plague, should be made as quickly as possible.

(*c*) If the destruction of rats is judged necessary, it shall be accomplished under the conditions indicated above in the case of ships with plague-stricken rats.

(*d*) Until all suspicion may be eliminated, the passengers and crew may be submitted to observation, the duration of which should not exceed five days counting from the date of arrival, except in special cases, when the sanitary authority may prolong the observation to a maximum of ten days.

Article 25. The sanitary authorities of the port must deliver to the captain, the owner, or his agent, whenever a demand for it is made, a certificate setting forth that the measures for the destruction of rats have been efficacious and indicating the reasons why these measures have been applied.

Article 26.—Ships infected with cholera are to be subjected to the following regulations:

1. Medical visit (inspection).
2. The sick are to be immediately disembarked and isolated.
3. Other persons ought also to be disembarked, if possible, and subjected, dating from the arrival of the ship, to an observation, the duration of which shall not exceed five days.
4. Soiled linen, wearing apparel, and personal effects of crew and passengers which, in the opinion of the sanitary authority of the port, are considered as infected, are to be disinfected.
5. The parts of the ship which have been inhabited by persons sick with cholera, or which are considered by the sanitary authority as infected are to be disinfected.
6. The bilge-water is to be discharged after disinfection.

   The sanitary authority may order the substitution of good potable water for that which is contained in the tanks on board.

   The discharge or throwing overboard into the water of a port, of dejecta, shall be forbidden unless they have been previously disinfected.

Article 27. Ships suspected of cholera are to be subjected to measures prescribed under Nos. 1, 4, 5 and 6 of Article 26.

The crew and passengers may be subjected to an observation which should not exceed five days, to date from the arrival of the ship. It is recommended during the same time to prevent the debarkation of the crew except for reasons of duty.

Article 28. Ships *indemne* of cholera are to be admitted to free pratique immediately, whatever may be the nature of their bill of health.

The only regulations which the sanitary authorities of a port may prescribe in their case are the measures provided in Nos. 1, 4 and 6 of Article 26.

The crews and passengers may be submitted, in order to show their state of health, to an observation, which should not exceed five days to be computed from the date when the ship sailed from the infected port.

It is recommended that during the same time the debarkation of the crew be forbidden except for reasons of duty.

Competent authority at the port of arrival may always demand, under oath, a certificate from the ship's surgeon, or, in the absence of a surgeon, from the captain, setting forth that there has not been a case of cholera on the ship since sailing.

Article 29. Competent authority will take account, in order to apply the measures indicated in Articles 21 to 28, of the presence of a physician on board and a disinfecting apparatus in ships of the three categories mentioned above.

In regard to plague, it will equally take account of the installation on board of apparatus for the destruction of rats.

Sanitary authorities of such countries, where it may be convenient to make such regulations, may dispense with the medical visit and other measures toward *indemne* ships which have on board a physician specially commissioned by their country.

Article 30. Special measures may be prescribed in regard to crowded ships, notably emigrant ships, or any other ship presenting bad hygienic conditions.

Article 31. Any ship not desiring to be subjected to the obligations imposed by the authority of the port in virtue of the stipulations of the present convention is free to proceed to sea.

It may be authorized to disembark its cargo after the necessary precautions shall have been taken; namely, First, isolation of the ship, its crew and passengers; second, in regard to plague, demand for information relative to the existence of an unusual mortality among rats; third, in regard to cholera, the discharge of the bilge-water after disinfection and the substitution of a good potable water for that which is provided on board the ship.

Authority may also be granted to disembark such passengers as may demand it, on condition that these submit themselves to all measures prescribed by the local authorities.

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2. The word "observation" signifies isolation of the passengers, either on board ship or at a sanitary station before being given free pratique.

3. The term "crew" is applied to persons who may make, or, who have made, a part of the personnel of the vessel and of the administration thereof, including stewards, waiters, "cafedji," etc. The word is to be construed in this sense wherever employed in the present convention.

Article 32. Ships coming from a contaminated port, which have been disinfected and which may have been subjected to sanitary measures applied in an efficient manner, shall not undergo a second time the same measures on their arrival at a new port, provided that no new case shall have appeared since the disinfection was practiced, and that the ships have not touched in the meantime at an infected port.

When a ship only disembarks passengers and their baggage, or the mails, without having been in communication with *terra firma*, it is not to be considered as having touched at a port, provided that in the case of yellow fever it has not approached sufficiently near the shore to permit the access of mosquitoes.

Article 33. Passengers arriving on an infected ship have the right to demand of the sanitary authority of the port a certificate showing the date of their arrival and the measures to which they and their baggage have been subjected.

Article 34. Packet boats shall be subjected to special regulation, to be established by mutual agreement between the countries in interest.

Article 35. Without prejudice to the right which governments possess to agree on the organization of common sanitary stations, each country should provide at least one port on each of its seaboards, with an organization and equipment sufficient to receive a vessel, whatever may be its sanitary condition.

When an *indemne* vessel, coming from an infected port, arrives in a large mercantile port, it is recommended that she be not sent to another port for the execution of the prescribed sanitary measures.

In every country, ports liable to the arrival of vessels from ports infected with plague, cholera or yellow fever, should be equipped in such a manner that *indemne* vessels may there undergo, immediately on their arrival, the prescribed measures, and not be sent for this purpose to another port.

Governments should make declaration of the ports which are open in their territories to arrivals from ports infected with plague, cholera or yellow fever.

Article 36. It is recommended that in large seaports there be established:

(*a*) A regular medical service and a permanent medical supervision of the sanitary conditions of crews, and the inhabitants of the port.

(*b*) Places set apart for the isolation of the sick and the observation of suspected persons. In the stegomyia belt there must be a building or part of a building screened against mosquitoes, and a launch and ambulance similarly screened.

(*c*) The necessary installation for efficient disinfection and bacteriologic laboratories.

(*d*) A supply of potable water above suspicion, for the use of the port, and the installation of a system of sewerage and drainage, adequate for the removal of refuse.

*Section IV. Measures on land frontiers. Travelers. Railroads. Frontier Zones. River Routes.*

Article 37. Land quarantines should no longer be established, but the governments reserve the right to establish camps of observation if they should be thought necessary for the temporary detention of suspects.

This principle does not exclude the right for each country to close a part of its frontier in case of necessity.

Article 38. It is important that travelers should be submitted to a surveillance on the part of the personnel of railroads, to determine their condition of health.

Article 39. Medical intervention is limited to a visit (inspection) with the taking of temperature of travelers, and the succor to be given to those actually sick. If this visit is made, it should be combined as much as possible with the customhouse inspection to the end that travelers may be detained as short a time as possible. Only persons evidently sick should be subjected to a searching medical examination.

Article 40. As soon as travelers, coming from an infected locality, shall have arrived at their destination, it would be of the greatest utility to submit them to a surveillance which should not exceed ten or five days, counting from the date of departure, the time depending on whether it is a question of plague or cholera. In case of yellow fever the period should be six days.

Article 41. Governments may reserve to themselves the right to take particular measures in regard to certain classes of persons, notably vagabonds, emigrants and persons traveling or passing the frontier in bands.

Article 42. Coaches intended for the transportation of passengers and mails should not be retained at frontiers.

In order to avoid this retention a system of relays ought to be established at frontiers, with transfer of passengers, baggage and mails. If one of these carriages be infected or shall have been occupied by a person suffering from plague, cholera or yellow fever, it shall be detached from the train for disinfection at the earliest possible moment.

Article 43. Measures concerning the passing of frontiers by the personnel of railroads and the post office are a matter for agreement of the sanitary authorities concerned. These measures should be so arranged as not to hinder the service.

Article 44. The regulation of frontier traffic, as well as the adoption of exceptional measures of surveillance, should be left to special arrangement between contiguous countries.

Article 45. The power rests with governments of countries bordering on rivers to regulate by special arrangement the sanitary régime of river routes.

ARTICLES RELATING TO YELLOW FEVER.

Article 46. Ships infected with yellow fever are to be subjected to the following regulations:

1. Medical visit (inspection).
2. The sick are to be immediately disembarked, protected by netting against the access of mosquitoes and transferred to the place of isolation in an ambulance or a litter similarly screened.
3. Other persons should also be disembarked if possible, and subjected to an observation of six days, dating from the day of arrival.
4. In the place set apart for observation, there shall be screened apartments or cages where anyone presenting an elevation of temperature above 37.6 degrees Centigrade shall be screened until he may be carried in the manner indicated above to the place of isolation.
5. The ship shall be moored at least two hundred meters from the inhabited shore.
6. The ship shall be fumigated for the destruction of mosquitoes before the discharge of cargo, if possible. If a fumigation be not possible before the discharge of the cargo, the health authorities shall order either:

(*a*) The employment of immune persons for discharging the cargo, or

(*b*) If non-immunes be employed they shall be kept under observation during the discharging of cargo and for six days, to date from the last day of exposure on board.

Article 47. Ships suspected of yellow fever are to be subjected to the measures which are indicated in Nos. 1, 3 and 5 of the preceding article; and, if not fumigated, the cargo shall be discharged as directed under subparagraph (*a*) or (*b*) of the same article.

Article 48. Ships *indemne* from yellow fever, coming from an infected port, after the medical visit (inspection), shall be admitted to free pratique, provided the duration of the trip has exceeded six days.

If the trip be shorter, the ship shall be considered as suspected until the completion of a period of six days, dating from the day of departure.

If a case of yellow fever develop during the period of observation, the ship shall be considered as infected.

Article 49. All persons who can prove their immunity to yellow fever, to the satisfaction of the health authorities, shall be permitted to land at once.

Article 50. It is agreed that in the event of a difference of interpretation of the English and Spanish texts, the interpretation of the English text shall prevail.

TRANSITORY DISPOSITION.

The governments which may not have signed the present convention are to be admitted to adherence thereto on demand; notice of this adherence to be given through diplomatic channels to the government of the United States of America and by the latter to the other signatory governments.

Made and signed in the City of Washington on the 14th day of the month of October nineteen hundred and five, in two copies, in English and Spanish respectively, which shall be deposited in the State Department of the Government of the United States of America, in order that certified copies thereof, in both English and Spanish, may be made to transmit them through diplomatic channels to each one of the signatory countries.

Dr. Eduardo Moore, Juan J. Ulloa, Juan Guiteras, E. B. Barnet, Emilio C. Joubert, M. H. Alcivar, Walter Wyman, H. D. Geddings, John S. Fulton, Walter D. McCaw, J. D. Gatewood, H. L. E. Johnson, M.D., Joaquin Yela, E. Lleóga, J. L. Medina, M.D., Daniel Ed. Lavoreria, N. Veloz Goiticoa.

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## MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

*Thirty-first Annual Meeting, held at Indianapolis, Oct. 10-12, 1905.*

(*Continued from page 1354.*)

### General Blood Poisoning Emanating from the Nose and Pharynx.

DR. J. HOLINGER, Chicago, stated that micro-organisms of the nose and pharynx were formerly considered harmless. A great many diseases can be directly traced to them. Fatal cases of blood poisoning occur, but are not very frequent. With the decrease in the number of streptococci in the pharynx all general symptoms not only diminish, but disappear. The connection between acute rheumatism and tonsillitis is well known. The tonsil receives its lymph from the nose and pharynx, and may, therefore, become secondarily inflamed in cases of infections located in the nose and pharynx. There is a difference in the course of the disease, whether the infection dates from the nose and pharynx, or directly from the tonsils. The most striking example is diphtheria. Histories of cases are given by the author where chronic rheumatism of many years' standing, which had been treated with all kinds of medicine, massage and *x*-ray, disappeared when the suppurative processes in the nose and its sinuses were cured. The mixed infections of tuberculosis of the lung and bones may be avoided, in the opinion of the author, if the pharynx and nose whence they start are treated. As to treatment, very little is accomplished by sprays. Washes with boric acid solution are used in the nose, and in the pharynx paintings with solutions of iodin and iodid of potash and glycerin.

### Cancer of the Rectum.

DR. E. B. SMITH, Detroit, made a special plea for extirpation in the treatment of cancer of the rectum as being the only procedure that will give hope of a cure. He spoke of colotomy as the operation of necessity rather than of choice, and urged examination in all cases where the rectum is involved, as in cases of hemorrhage, where there are bloody stools, where there is painful defecation, and where there is constipation, and advised a microscopical examination in all cases where the neoplasm is developed. The author shows that the extir-

pation of a part or the whole of the rectum by the Kraske method is the ideal operation, and should be practiced only by those who have had experience in capital operations.

### Surgery of Visceral Injuries from Violence to the Abdominal Wall.

Dr. John Young Brown, St. Louis, called attention to the mortality in such cases, and emphasized the importance of their early diagnosis and prompt surgical treatment. He reported a series of six cases, in all of which abdominal resection was done. Of the six cases, one recovered and five died. An analysis of cases confirms the importance of early diagnosis and prompt surgical treatment by abdominal section in all cases of abdominal contusion in which there were present the slightest symptoms pertaining to injury to peritoneal viscera.

### Intraperitoneal Tuberculosis.

Dr. F. F. Lawrence, Columbus, Ohio, drew the following conclusions: 1. Intraperitoneal tuberculosis is frequently a local disease. 2. It probably occurs much more frequently in the female than in the male. 3. In a large majority of cases it is primarily visceral and the general peritoneum is secondarily involved. 4. The surgical treatment is rational, sometimes agreeably surprising in results, and again bitterly disappointing. 5. In this, as in many other surgical conditions, early diagnosis and early operation will bring more certain results. 6. In this condition the greatest obstacle to overcome is the idea that it is a secondary condition. 7. No case of intraperitoneal tuberculosis should be denied the benefits of operation, no matter how extensive, as long as there is no positive pulmonary or pleuritic involvement, for the reason that some apparently hopeless cases fully recover. 8. When there is a tubercular peritonitis, a sequel of tubercular tubes, ovaries or appendix, the primary focus should always be removed. 9. In these tubercular cases the mesenteric glands have not been found frequently involved, and when they are operation accomplishes very little good. 10. In tubercle of tubes and ovaries the adhesions are usually firm, sometimes, though not usually, very vascular, and not infrequently involve loops of the small intestine; hence the greatest care is necessary to avoid serious injury to the bowel and at the same time separate completely all adherent surfaces and provide complete drainage. 11. Drainage is the great factor in recovery, when properly carried out.

### Pyloroplasty with the McGraw Ligature.

Dr. J. Henry Carstens, Detroit, said that many cases with disturbances of digestion can not be diagnosticated or relieved by medication. These should be subjected to an exploratory celiotomy. Gastroenterologists should not treat patients for months and years if they can not make a positive diagnosis or cure a patient. After reasonable efforts the patient should be sent to the surgeon for relief. The McGraw ligature is a valuable means of relieving stricture at the pylorus and the resulting dilatation of the stomach. This method of operating is easy and quick; the danger is very small, and the operation is preferable to those heretofore used in benign operatractions of the pylorus. It is a great deal better than gastroenterostomy, as one restores as nearly as possible the normal condition.

### Ovarian Cystoma.

Dr. L. P. Luckett, Terre Haute, Ind., reported a case of ovarian cystoma on which he had operated. The tumor originated from the left ovary, was attached by a broad pedicle, which was tied off in sections. The uterus and right ovary were found to be normal. The fluid and tumor were estimated to have weighed between seventy and eighty pounds. The patient made an excellent recovery.

### Closure of Vaginal Fistulae.

Dr. Maurice J. Rosenthal, Fort Wayne, Ind., said that a considerable area of scar tissue and vaginal mucosa may be inverted into the bladder without producing ill effects. Ureteral fistula embedded in scar tissue may be inverted into the bladder and continue to discharge its urine without becoming stenosed. Even large vaginal fistulæ, where part of the bladder walls are lost in scar tissue from a previous hysterectomy, may be successfully operated by denudation and suture through the vagina without disturbing the relations of the bladder or any adhesions of pelvic viscera which may have formed in the scar.

### Sprained Ankle.

Dr. Robert Carothers, Cincinnati, drew the following conclusions: 1. No one is exempt from a sprained ankle, although some are more prone to it than others. 2. In severity a sprained ankle will range from a trivial accident to one of extreme severity and everlasting. 3. The outer side more often than the inner side of the ankle is the seat of trouble. 4. The diagnosis, which is ordinarily made with ease, is at times made with difficulty, and occasionally an *x*-ray examination is required to make the diagnosis certain. 5. The treatment by immobilization with a plaster-of-Paris cast is unsatisfactory and at times injurious. 6. That the treatment instituted by Coteral, the so-called adhesive plaster strappings, advising and urging the patient to walk on the injured foot, the early removal of these straps, followed by massage, gives the most satisfactory and best results. 7. That the old cases are to be, under anesthesia, converted into acute sprains and treated in the same manner.

### Shall the Profession or the Laity be Responsible for the Death Rate in Appendicitis.

Dr. J. C. O'Day, Oil City, Pa., said that every physician, when confronted with a case of appendicitis, should frankly tell the patient the nature of his trouble; explain to him, honestly and candidly, the disposition of his disease; that no one can tell what an inflamed appendix will do, and that there is no safety till the offending organ has been removed. If the patient then decides to postpone operation, he, not the surgeon, should be responsible. If this were done, he thinks we would hear no more complaints of, "Why did not the physician advise operation before it was too late?"

### Sarcoma of the Anterior Segment of the Globe.

Dr. O. Tydings, Piqua, Ohio, presented a brief history of a case on which he had operated for the removal of a melanosarcoma of the anterior segment of the globe. The diagnosis was confirmed by reliable microscopists and pathologists. Five days after the removal of the tumor the patient disappeared and the speaker did not see him again until the following August. There was no recurrence; the cicatrix is smooth; the lone pigmented spot, not larger than a pin-point, which the author takes to be the remains of an old hernia in the iris, is still present, but absolutely quiescent. The patient's vision, which, when he first saw him, was, right eye 20/40, and when operated 20/200, and left eye, 20/30, is now 20/20 in each eye. So far as the author has been able to examine authorities, the case stands alone.

The following papers were also read: "Bone Tuberculosis, with Report of a Case," by Dr. W. W. Vinnedge, Lafayette, Ind.; "Post-Operative Acute Dilatation of the Stomach, with Report of a Case Following Nephropexy," by Dr. A. E. Halstead, Chicago; "Treatment of Tuberculosis of the Cervical Lymphatics," by Dr. H. C. Sharp, Jeffersonville, Ind.; "Surgical Treatment of Nephritis," by Dr. A. H. Ferguson, Chicago; "Visceral Ptosis: Its Surgery," by Dr. Earl Harlan, Cincinnati; "The After-Treatment of Gastroenterostomy," by Dr. Charles A. L. Reed, Cincinnati; "Extraperitoneal Rupture of Bladder Complicating Fracture of Pelvis," by Dr. J. R. Eastman, Indianapolis; "Cysts of the Mesentery, with Report of a Case," by Dr. L. G. Boweds, Dayton, Ohio; "Perforating Ulcers of the Duodenum, with Report of a Case," by Dr. M. A. Austin, Anderson, Ind.; "Appendicitis," by R. E. Haughton, Richmond, Ind.

The papers mentioned above were read in the surgical section. In the medical section, over which Dr. Frank P. Norbury, Jacksonville, Ill., presided, the following papers were read and discussed:

### The Present Conception of Bright's Disease.

Dr. G. W. McCaskey, Fort Wayne, Ind., said that the only possible justification for the use of the term is a historical one, and while its meaning must in a sense change with the changing views of pathology, yet the primary groundwork which constitutes the historical basis on which it stands should be kept constantly in view.

He presented a brief inquiry as to the character of the group of morbid states and symptoms originally described by Bright. In spite of the mutations of opinion and classifications, one can not but be impressed by the close resemblance be-

tween the views entertained to-day and those of half a century ago concerning what may be called the gross features of Bright's disease. The author divides the causal conditions into six classes: First, the acute infections; second, chronic infections; third, chemical poisons introduced into the circulation, of which lead may be taken as a type; fourth, the influence of cold; fifth, the products of perverted gastrointestinal function, and especially intestinal putrefaction; and, sixth, the products of perverted metabolism.

### Treatment of Tuberculous Pleurisy with Effusion.

DR. THEODORE POTTER, Indianapolis, presented the following deductions: 1. The profession has gone too far in accepting the general principle and following the general practice that pleural serous effusions, unless they show a tendency to early absorption, should be removed. 2. Granting that in the majority of such cases pleurisy is the dominant feature and removal of the fluid the proper procedure, and that such removal will probably tend to arrest the pleural tuberculosis, which is usually present, nevertheless the best results ought to be obtained by dealing with each case on its own merits. 3. In cases in which the pleurisy is the sole or dominant feature, the removal of the fluid is the proper treatment; and in proportion to the accuracy of differentiation between the pleural and the pulmonary disease will be the promise of good results by the removal of an effusion. 4. In cases in which the tuberculosis of the lung is evidently or probably the overshadowing feature, a conservative course as regards the removal of a serous effusion is the proper one. In some cases the fluid had best be left to Nature to take care of, with the hope that the compression, immobilization, and physiologic quietude of the tuberculous lung may tend to arrest the disease. In other cases of this type the removal of the fluid should be undertaken only after due consideration.

### Tuberculosis in General Practice.

DR. HUGH A. COWING, Muncie, Ind., said that the general practitioner should exercise great care in physical examination. He should strive to make an early diagnosis. He should carry a life-saving knowledge into the tuberculous home; improve its hygiene, and teach sanitation. He should employ the pure air treatment, the method varying according to the individual case. He should co-operate with health boards and report cases. He should estimate the cost before sending a patient to a health resort. He should study health resorts and sanatoriums, and visit them, if possible. He should oppose quack consumption cures, and quack doctors who "cure consumption." He should influence the press for sanitation. He should fight patent medicines. He should expose christian science and kindred fads that rob the consumptive of his chance for life. He should endeavor to seek legislation for sanitary advancement. He should help to popularize the consumptive sanatorium health farm. Membership in a society for the prevention of tuberculosis will make the physician's work more effective.

### Management of Neurasthenics.

DR. H. A. RODEBAUGH, Columbus, Ohio, said that an individual becomes neurasthenic only after having suffered from some of the psycho-neuroses, the latter having been caused by traumatism, by disturbed metabolism, or by peripheral nerve irritation. Heredity, occupation or environment can hardly be considered etiologic factors without further specification. Neurasthenia should be considered a mental rather than a physical disease. Mental symptoms often persist after the removal of all physical causes, and can only be relieved by psychic treatment. Mental hygiene is both preventive and curative. The neurasthenic should be taught that a healthy mental attitude conduces to bodily health.

### Autointoxication.

DR. D. L. FIELD, Jeffersonville, Ind., said that the part played by the intestinal emunctories in the elimination of certain poisonous substances is attested by the commonly fetid stools of persons who frequent postmortem examinations. The fetid character recalled the putrid odor of emanations from the cadaver. If poisonous products have been absorbed, an effort should be made to destroy them. The liver has the power of arresting poisons. One should, therefore, stimulate its action by proper therapeutic measures. If the poisons have escaped the liver they should be eliminated by the skin, the lungs, the intestines and the kidneys. If all these attempts fail one should have recourse to certain antidotes which tend to counteract the physiologic effects of the poisons which menace the system. As a striking example, he mentions the antagonistic properties of poisons in atropin and pilocarpin. The strength of the patient should not be neglected, so that he may have time to eliminate the poisons.

### Pathology of Epilepsy.

DR. MARC RAY HUGHES, St. Louis, shows that each epileptic stage has a distinct pathology, and the entire category for classification of epilepsy, including the psychical varieteis, has one common pathology or gross structural change, and that this structural change, whether idiopathic or organic, has to do largely with the movements of the centrifugal and centripetal mental forces as they are found in the psychical equivalent of epilepsy—dual consciousness, obliviousness and allied states of mental eclampsia.

### History and Treatment of Epilepsy.

DR. JOHN W. SELMAN, Greenfield, Ind., said that epilepsy and other diseases may exist together, and for this reason the prognosis and diagnosis are to be carefully reached and given. Jan. 2, 1905, a man, 28 years old, was brought to him, who was having epileptic seizures five and six times a week. There was no aura. Like a flash he was in hard convulsions. The general appearance of the patient indicated great anemia, malnutrition, with diarrhea. The author used subcutaneous injections of normal saline solution, with the bitter tonics and arsenic, and at the expiration of ten days a great change in his condition was noticeable, and in three months he returned home apparently well. The treatment should consist in the removal of any exciting cause, in the checking of the convulsive tendency, and in the prevention of any further attacks. The treatment is medicinal or operative, according to the causal factors.

### The Cigarette; Its Relation to Mental and Nervous Diseases.

DR. W. B. FLETCHER, Indianapolis, quoted extensively from articles by physicians and prominent laymen on the cigarette habit, and said that he has sometimes asked himself if the members of the medical profession are not largely responsible for the widespread prejudice against the cigarette. It is so much easier to agree with the grief-stricken mother in assigning the cause of the loved one's downfall to the innocent habit of cigarette smoking, than to tell her the real cause which examination has revealed, or which has been imparted under the seal of professional confidence. In the past twenty-two years he has examined over 1,200 cases of nervous disease and insanity where the cause of the malady was given as the cigarette habit. In not one case has he reason to believe that tobacco had anything to do with the causation of the disease. They were all young men, and some of them were insane without doubt. Some of them smoked cigarettes to excess, but their insanity is only a cause of their excess, and not the excess the cause of the insanity. Many of them were simple cases of hebephrenia, with a cigarette attachment, so to speak. One boy, 16 years of age, and at the time in acute mania, had been severely punished by his father to "beat out the cigarette habit." After three months he recovered and proved to be an unusually bright and truthful boy. He acknowledged that he had smoked three cigarettes in his life, just before his mind gave way from overwork in the harvest field. Some of the cases were tuberculosis of the brain, but Dr. Fletcher thinks he is safe in saying that fully 90 per cent. were young fellows reared in idleness, who had acquired other habits which were reducing their vitality and sapping their brain, and the cigarette was used as a cover by the patients, parents and friends, or as an excuse to hide their shame.

### The Tonic Alterative Action of Copper and Arsenic in Primary and Second Spanemic States.

DR. GEORGE F. BUTLER, Chicago, said that arsenic has a very decided action on tissue change and markedly affects the glandular, nervous, respiratory and cutaneous systems. Cop-

per is reputed to be a violent poison, yet, except so far as its toxic effects as a foreign body in the eye are concerned, this repute is decidedly undeserved. Copper is recommended as an alterative tonic useful in epilepsy, chorea and other spasmodic conditions, especially those connected with debility, by the older authors, and later therapeutists sustain this old repute of copper. Several authorities were quoted by the essayist to the effect that this drug, in small doses, stimulates both the heart and the capillary circulation, and is a general nerve tonic. As to the preparation to be employed, all agree that while copper sulphate is of value, it has at times unexpected dangerous untoward effects when the point of saturation is reached. These effects, through the influence of the drug on the vascular system, often take the direction of cardiac neuralgias and pseudo-anginas. The double salts of copper in small doses exert a cardiac action similar to that of digitalin, strophanthus, helleborein, etc. Hare prefers copper arsenite. He has found that under its use digestion and nutrition improve. It is superior to Fowler's solution in chorea and similar neuroses. In toxemic conditions, like secondary malarious manifestations, with the resultant pallor, copper and arsenic are of decided value. Cases in which the periodic tendency has disappeared improve decidedly under copper and arsenic, whereas quinin and iron are worse than useless. The influence of arsenic is very marked on chronic rheumatism and so-called rheumatic gout, neuralgias of various sorts, in tic, and hemicrania, as well as in angina pectoris, chorea, epilepsy and asthma. In certain of the gouty bronchites, at the onset of phthisis, in imperfectly cleared-up pneumonic lung consolidation, arsenic acts sometimes with remarkable efficiency. The influence of both drugs on the liver, whose double functions are so necessary to the tissue changes of the system, show that both play a part in assisting assimilation and at the same time destroying waste products.

### The Claims of the Adolescent.

Dr. Frank P. Norbury, Jacksonville, Ill., stated that the claims of the adolescent for recognition by the medical profession, are genuine, not hypothetical, and involve three important considerations: 1. Physiologic—a study of growth, development, sex differentiation. 2. Psychologic—normal and morbid, involving honest endeavor of the physician to see the real needs of the individual. 3. Pedagogic—training and treatment to go together. All these considerations show that a demand exists for qualified men to consider earnestly the problems of mind and body of this period.

The following papers were likewise read: "Heads and Tales," by Dr. T. B. Greenley, Meadow Lawn, Ky.; "Simple Eye Conditions that Should Be Familiar to Every Physician," by Dr. Mark P. Stevenson, Akron, Ohio; "Some Interesting Problems in Urinary Diagnosis," by Dr. Arthur R. Elliott, Chicago; "Hepatic Uremia and Its Treatment," by Dr. Alfred C. Croftan, Chicago; "Enterotoxismus (Autointoxication) from Meat," by Dr. Fenton B. Turck, Chicago; "The Leucocytes in Pertussis," by Dr. F. S. Churchill, Chicago; "Poliomyelitis," by Dr. Hugh T. Patrick, Chicago; "Demonstration of Sleep Inducing Method," by Dr. J. B. Learned, Northampton, Mass.; "Some Rare Sequelæ of Syphilis," by Dr. Henry J. Scherck, St. Louis; "Combined Method of Treatment in the Arrest and Cure of Tuberculosis," by Dr. H. B. Weaver, Asheville, N. C.; "Plea for Moral Restraint of Students in Medical Colleges," by Dr. J. M. Batten, Downington, Pa.

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## MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

*Annual Meeting, held in Scranton, Sept. 26-28, 1905.*

(*Continued from page 1351.*)

### Ectopic Gestation.

Dr. Charles P. Noble, Philadelphia, stated that during the past 16 years he has operated on 91 patients; 89 by abdominal section and 4 by the vaginal route, two of the latter subsequently requiring abdominal section. In 44 of these cases the pregnancy was in the left tube; in 40 in the right; in 7 the report did not show which tube was involved. The causes are usually mechanical, due either to infection or congenital defects of the tube. The ideal time for operation is before rupture, and should consist of the removal of the involved tube with or without the ovary. Early diagnosis and prompt operative interference were urged as important factors. Careful consideration of the history greatly facilitates the diagnosis.

#### DISCUSSION.

Dr. George D. Nutt, Williamsport, reported two cases of rupture occurring in the broad ligament and also a case in which a rupture of the right tube containing a quantity of blood had been completely walled off from the abdominal cavity, the menstrual periods being regular for seven months prior to the operation.

Dr. J. C. O'Day, Oil City, mentioned as diagnostic symptoms a history of sterility without apparent cause, with sudden cessation of the menstrual periods and pelvic pain. Among the causative factors were mentioned gonorrhea, torsion of the tubes and other mechanical factors, he reported a case in which an operation for a cystic ovary revealed a ruptured extrauterine pregnancy in the left tube which was completely walled off.

Dr. Frankhlin F. Arndt, Scranton, recommended as a diagnostic aid curettage and examination of the scrapings for decidual cells.

Dr. Noble, in closing referred to cases in which the pain was in the epigastrium and temperature above normal even after considerable hemorrhage had taken place. He felt that spontaneous recovery undoubtedly takes place in a number of cases, but, of course, it is not within the power of the physician to tell just which these cases will be; hence, operative interference must be resorted to in all cases. Where there is a history of missed period, pelvic pain and the finding of a mass, a diagnosis of extrauterine pregnancy will in 99 cases out of 100 be correct.

### The Restitution to Normal After Childbirth.

Dr. Barton Cooke Hirst, Philadelphia, stated that injuries of the genital canal and backward displacement of the uterus constituted more than one-third of over 6,000 cases of diseases of women that had come under his observation, and, if to this number are added the puerperal infections, pelvic inflammations, abortion, subinvolution, endometritis and other pathologic consequences of parturition, they would constitute far the larger proportion of cases. Among the remainder would be a limited number of neoplasms, genital tuberculosis and gonorrhea. He urged the establishment of hospitals in connection with medical colleges, in order that the students might be taught the practical as well as the theoretical side of obstetrics. The patient should be carefully watched during the period of gestation and parturition, and a sufficient number of examinations made afterward to insure the physician that all the organs have returned to normal.

Dr. George M. Boyd, Philadelphia, stated that, except in cases of excessive bleeding and injury to the broad ligaments, the cervix should not be repaired immediately after childbirth, but the reverse is true in regard to injuries to the perineum, as better results are secured from immediate repair, except where the patient is in a very exhausted condition. He urged careful watching over the patient during pregnancy and careful examination after childbirth to satisfy the attendant that the genital tract had returned to normal.

### Uterine Curettage.

Dr. E. E. Montgomery, Philadelphia, stated that the indications for the use of the curette are chronic endometritis; polypoid or mucous growths projecting from the mucous surface of the uterine cavity; retrodisplacements if followed by measures to restore the normal position; pelvic inflammation, if associated with measures to correct the intraperitoneal disorders; carcinoma for the purpose of securing scrapings for study, and the retention of products of embryonic life. The conditions cited as contraindications were: acute endometritis, intrauterine myomata, or any other cases in the absence of intrauterine inflammation. Aseptic precautions should be observed in the preparation of the operator, the patient and the instruments. Pratt's dilators and metal bougies were recommended. The operation should be performed only by one skilled in the work, and drainage is essential.

### Significance and Management of Chronic Uterine Hemorrhage.

Dr. George Erety Shoemaker, Philadelphia, stated that the determination of whether or not the flow is normal can only be made by comparison with the other periods of the same individual during a time when she was in a healthy condition. He cited, among the causes for hemorrhage, passive congestion of the pelvic vessels, pelvic disease outside of the uterus,

prolapsed and cystic ovaries, chronic adherent inflammatory disease, disorders of pregnancy, partial placenta previa, threatened abortion, and extrauterine pregnancy. He deprecated the idea that preceding the menopause there was likely to be slight hemorrhage, and urged careful examination and prompt treatment of all cases.

DISCUSSION.

DR. RICHARD H. GIBBONS, New York, reported a case in which, after he had done a curettement and employed a bichlorid solution of 1 to 3000, he opened the abdominal cavity to complete the operation and found the intestines blistered, which could only be explained by the escape of fluid into the abdominal cavity. He considers the curette a dangerous instrument, except in experienced hands, and reported cases illustrative of this point.

DR. CHARLES P. NOBLE, Philadelphia, emphasized the importance of educating the laity to know that hemorrhage preceding the menopause is not a natural factor and calls for thorough examination, which he believed would be valuable in reducing malignant disease. He called attention to the necessity for accurate diagnosis before the employment of the curette and deprecated its use to assist in diagnosis, except to secure scrapings for examination in malignant disease.

DR. GEORGE M. BOYD, Philadelphia, deprecated the use of the curette following miscarriage or abortion. He believes that the finger is better able to empty the uterus. In an experience of 15 years at the Philadelphia Lying-in Charity, covering over 10,000 cases, he never found it necessary for that purpose.

DR. J. M. BALDY, Philadelphia, believed that the curette was a valuable instrument in properly selected cases, and felt that the best method of dilatation was by means of the forceps, as it was thus necessary to make but one insertion, minimizing the danger of injury to the genital tract.

### The Technic Employed in One Hundred Laparotomies.

DR. L. J. HAMMOND, Philadelphia, reported 100 cases, 36 with localized pus and 64 in which pus was absent, consisting of appendicitis, cholelithiasis, etc., with but four fatalities, one of which was drained. He expressed the opinion that drainage should only be instituted when there is some positive indication for it, although in cases of disease of the gall bladder drainage should always be employed.

DR. J. G. CLARKE, Philadelphia, stated that as the number of operations became greater the number of times which drainage was employed decreased. He believes that drainage should be the exception rather than the rule.

DR. J. MONTGOMERY BALDY, Philadelphia, believes that the less the abdominal contents are handled the better, and that the more experienced the operator became the less he would employ drainage.

DR. ERNEST LAPLACE felt that drainage should not be employed unnecessarily, but in cases of doubt it is better to drain.

### Management of Pus Cases in Abdominal Surgery.

DR. REED BURNS, Scranton, stated that in empyema of the gall bladder the best results followed cholecystectomy, and in cases of pyosalpinx, suppurating ovaries and tubes, ovarian abscesses, suppurating cysts and acute salpingitis, operative procedure is the method of choice. In appendiceal abscess he recommended that the pus be evacuated before opening the abdomen. Before closing, the wound should be flushed and drainage established if necessary.

DISCUSSION.

DR. W. L. ESTES, South Bethlehem, felt that the reason drainage did not produce the results expected was because of improper method. In some cases an important factor, particularly with women, is the raising of the head of the bed.

DR. J. C. O'DAY, Oil City, said that the gall bladder should be left in and drained whenever possible owing to the danger of fibrous degeneration and closure of the common duct.

DR. WILLIAM L. RODMAN, Philadelphia, did not favor the flushing of the abdominal cavity when the pus was confined to a limited and circumscribed area. Cholecystectomy should be confined to cases of gangrene or other disease of the gall bladder.

DR. RICHARD H. GIBBONS, New York, urged the necessity for immediate operation in all cases of appendicitis and stated that the appendix should be taken out whenever a laparotomy is done. In regard to the gall bladder it had better not be removed unless malignant degeneration is present.

DR. CHARLES P. NOBLE, Philadelphia, said that drainage should be employed only when especially indicated. It is better to remove the source of the infection and then pack with sterile gauze than to flush out the abdomen in cases of free pus and general peritonitis.

### Cancer of the Head and Neck.

DR. GEORGE W. CRILE, Cincinnati, Ohio, presented a detailed report of 128 operations on 110 cases. He believed that the same method of procedure should be instituted in these cases as is followed in removal of cancer in other portions of the body, sufficient tissue being removed to insure the destruction of all the infected glands.

DR. R. H. M. DAWBARN, New York, recommended complete extirpation of the growth, even removing a portion of the deep jugular vein if involved, and, in order to avoid tying vessels as much as possible, suggested the cording, first, of the lower extremities for ten minutes and then the upper extremities. For the purpose of keeping infection from the lungs, the foot of the bed should be raised and the patient not allowed to sit up until he can do so and drink a glass of water without coughing. If the patient becomes exceedingly weak during the operation, it may be necessary to discontinue it temporarily for a few days or a week, to be finished as soon as the physical condition of the patient will permit.

### A New Intestinal Bobbin.

DR. JOHN G. CLARKE, Philadelphia, reported his experiments with this device on dogs and illustrated its practical application on an imitation intestine. He called attention to the ease with which the parts could be separated after the suture was made, and claimed as one of the most important points in favor of the bobbin the shortening of the time required for the operation.

DISCUSSION.

DR. WILLIAM L. RODMAN, Philadelphia, said that whenever possible mechanical devices should be done away with, but felt that the bobbin presented was superior to the Murphy button, as it was less likely to cause intestinal obstruction. He believed that it would be of value in end-to-end anastomosis.

DR. R. H. M. DAWBARN, New York, also considered the device superior to the Murphy button and expressed his intention of trying it in posterior gastroenterostomies, which he felt to be about the only cases in which the use of the mechanical devices is justifiable.

DR. REED BURNS, Scranton, prefers the suture, except in cases of end-to-end anastomosis, in which he has found the Murphy button quite satisfactory.

DR. J. C .O'DAY, Oil City, felt placing the ends of the intestine in perfect apposition accomplished the desired result, no matter what means might be used to attain that end. While not favoring the free use of mechanical devices, he believed there were cases in which nothing but the Murphy button would give satisfactory results.

DR. EDWARD MARTIN, Philadelphia, attributed the preferences for the different mechanical devices in large measure to the experience of the individual operators, but believed that sutures would continue to be the most generally used.

### Wandering Gallstones.

DR. WILLIAM L. ESTES, South Bethlehem, stated that cases of indubitable perforation of the gall bladder are comparatively rare. If the ulceration is slow, and the patient survives the first septicemic condition, the stones will burrow in the direction of the least resistance and may be found in almost any part of the posterior portion of the abdomen. Prominent symptoms are severe pain, tumor, disturbance of gastric and intestinal function, jaundice, present only in the early stages or absent entirely, with general symptoms of septicemia.

### Surgery of the Gall Bladder and Ducts.

DR. J. MONTGOMERY BALDY, Philadelphia, stated that in many instances too radical treatment has been instituted. He reported, as illustrative of this point, a case in which the gall bladder and part of the cystic duct were removed, after which

the patient's condition cleared up and remained so for about a year, when she again returned to the hospital with the same symptoms as before. Another operation was done and intestinal adhesions broken up. Five months later she again returned suffering from jaundice and the other symptoms. After rest in bed for a couple of weeks, without operation, the symptoms disappeared. He believes that the gall bladder is too frequently removed on slight symptoms.

DR. WALTER S. STEWART, Wilkesbarre, urged the removal of gallstones from the bladder and the establishment of drainage. He reported a case in which, while operating for ventral hernia, he incidentally examined the gall bladder and common duct and found stones in both. In another case, diagnosed as appendicitis, the pus cavity was merely drained, and afterward the patient suffered from jaundice a number of times, and it was decided that it was due to gallstones.

DR. CHAS. P. NOBLE, Philadelphia, reported two cases of wandering gallstones, one of which gave a history of gallstone colic, rendering the diagnosis easy. In the other case, on operation, the stone was found between the stomach and gall bladder.

### Decompressive Operation in Inoperable Brain Tumors.

DR. HARVEY W. CUSHING, Baltimore, Md., referred to the various methods employed for accomplishing this result and stated that the bone should not be removed entirely, as, if it was, in a short time there would be a protrusion through the opening which frequently resulted in paralysis of a more or less extensive type. The chief end to be attained is to relieve the pressure and still leave some sort of a covering to keep the brain within the cranium. The most favorable position for the operation is the intramuscular temporal region.

DR. R. M. DAWBARN, New York, believes that it is best not to remove the bone entirely, but to prevent the edges growing together by placing a piece of non-irritating tissue between them. Where he finds it necessary to remove the bone, he covers the opening with a specially prepared celluloid, which will not be absorbed, is a non-irritant and forms a protection against trauma.

DR. SAMUEL KAY, Scranton, presented a case of supposed inoperable tumor of the brain occurring in a child of 7 years of age. There was extreme exophthalmos, polyuria and other gross pathologic changes, all of which had appeared within three years. Some months ago the quantity of urine passed in 24 hours was 27 quarts. At present it is about 23 quarts, with a specific gravity of 1000 to 1001. There is no specific history, and the child was perfectly well until 4 years of age. Now there can be felt an opening on each side of the skull, on the right about 6 cm. by 9 cm. and on the left about 5 cm. by 7 cm.

DR. CUSHING stated that it would be impossible to diagnose the condition of the case exhibited without having more of the facts and studying it more closely. Although he felt it quite probable that it was a tumor of the auditory centers with resultant nutritional changes and pronounced exophthalmos. He particularly urged the value of decompression as a palliative measure, but did not favor the insertion of celluloid or any other foreign substance.

### Direct Fixation of Fractures.

DR. JOHN B. ROBERTS, Philadelphia, while believing that in ordinary instances outward appliances were sufficient, referred particularly to the extraordinary cases and discussed in detail the various methods employed for this purpose, including wires, catgut, bone ferrules, metallic plates, etc. He stated that for transcutaneous fixation he had at first used ordinary wire nails, but afterward devised a surgical nail with a sharp point. For the open fractures or closed fractures which have been explored better results will ensue from the use of staples or plates.

DR. GEORGE W. GUTHRIE, Wilkesbarre, stated that his experience with direct fixation had been chiefly in cases of delayed union, and that he preferred an end-to-end fixation and the insertion of a silver wire which could be allowed to remain.

DR. CHAS. E. THOMPSON, Scranton, reported several cases of direct fixation and referred particularly to one in which a fracture of the femur was united by means of a wire nail and the man became able to walk around. It was supposed that union had taken place, but at his death, eighteen months later from another cause, autopsy revealed the fracture ununited.

DR. DEFOREST WILLARD, Philadelphia, believes that direct fixation should be employed in all cases where it is necessary in order to bring the fragments of the bone into direct apposition.

DR. JOHN S. NILES, Carbondale, referred to the fact that in the mining regions many of the cases are not seen until several hours after the injury, when they were in a very unsanitary condition. The surroundings are equally unsanitary, and in only rare instances can operation be performed under aseptic conditions.

DR. R. H. M. DAWBARN, New York, stated that in the cases referred to by the last speaker he would wait for twenty-four to forty-eight hours before effecting a union, in the meantime disinfecting the wound by means of bichlorid of mercury, etc.

DR. ROBERTS suggested that direct fixation immediately following an injury might in some instances prevent bony union by causing bone necrosis.

### How May the Scientific Meetings of the County Societies be Made More Profitable?

DR. THEODORE DILLER, Pittsburg, urged that the proceedings be such that they incite every member to active interest; the meetings should be held at least once a month; there should be a special committee on scientific program; three or four papers, of 10 to 20 minutes each, are best for each meeting, and the officers should always be ready with substitutes, so that there may be no failure of a program. The subjects should be varied, the medical topics being discussed more frequently than the surgical. Symposia are of value occasionally, as are also presentations of cases and specimens. He urged more frequent meetings, stating that there are only two county societies that hold bi-weekly meetings and only twenty hold monthly meetings.

DR. FRANKLIN F. ARNDT, Scranton, stated that the membership of the Lackawanna County Medical Society had increased during the last two years from 74 to 130, and that they are now making an effort to conduct their meetings along the line of the suggestions made by Dr. McCormack. Their scientific papers are provided for by a committee of 24 members, two of whom are responsible for the papers for each meeting.

DR. CHAS. A. E. CODMAN, Philadelphia, referred to the inauguration of the branch system in that city, and stated that, as each of the five branches held one meeting a month and the central society two meetings a month, it amounted to practically seven meetings a month for that society.

### The Question of Lowered Gastric Secretion.

DR. CHAS. G. STOCKTON, Buffalo, stated that he had been prompted to bring this matter before the society by the increased number of gastroenterostomies and the belief of some that the stomach as a digestive organ could be dispensed with, the food being digested in the intestinal canal, in which, however, he did not agree. He stated that there is an important relation existing between the gastric secretion and the motor functions of the stomach, and also between the gastric secretion and the secretions of the pancreas, liver and intestines. Lowered gastric secretion, he said, is the expression of the following pathologic processes: 1. Acute and chronic inflammatory states of the gastric mucosa. 2. Atrophy of the gastric mucosa. 3. General or systemic functional depression. 4. Gastric neurosis. 5. Congenital peculiarity. He discussed in detail the effect of this condition in malignant disease, anemia, etc. Referring to treatment, he mentioned careful regulation of the diet and regular feeding. He stated that it is better to perform gastroenterostomy than to subject the patient to continued food stagnation, but believed gastric secretion would more nearly return to normal after pyloroplasty.

### Surgical Treatment of Cardiospasm.

DR. EDWARD MARTIN, Philadelphia, discussed the various causes of the condition and stated that it was more common than was formerly believed. Among the common symptoms is stoppage of food just below the ensiform cartilage. Great care must be observed to distinguish it from obstruction or compression stenosis, the history being of great importance in diagnosis. The palliative treatment consists of keeping up

nourishment by means of a stomach tube. The operative treatment consists in divulsion of the sphincter. A case was reported in which palliative treatment had been carried on for some months without any effect, when an operation was done, and the patient made a good recovery.

### Gastroenterostomy; Indications and Technic.

DR. WILLIAM L. RODMAN, Philadelphia, defined the operation as being the means of opening the connection between the stomach and some part of the intestines so as to bring about emptying of the stomach, speaking particularly on the subject of gastrojejunostomy, which he stated was practically the only operation performed at the present time. He stated that the anterior method, while easier to perform than the posterior, had certain objectionable features, prominent among which was the length of the loop and the consequent liability of the occurrence of the vicious circle.

DISCUSSION.

DR. JAMES TYSON, Philadelphia, stated that his experience with this operation had been limited to two cases. The first was a woman, aged 50, who had been suffering for three days prior to the operation from a very severe hemorrhage supposed to be due to gastric ulcer. After three years she had another series of gastric hemorrhages of the most profuse type. A gastroenterostomy was done. Forty-eight hours after the operation she became delirious and died within twenty-four hours. The second case also showed symptoms of gastric ulcer, for which gastroenterostomy was performed, which was followed by the vicious circle. A second operation was done, which was followed by recovery. These two cases, he felt, illustrated the justification of operative interference in cases of gastric ulcer.

DR. JOHN B. ROBERTS, Philadelphia, felt that there was no doubt that the earlier these cases came to the surgeon the more favorable would be the prognosis. By educating the general practitioner to more accurate and earlier diagnosis the mortality will be decreased.

The following papers were also read: "Essentials of Successful Radium Therapy," by Chas. L. Leonard, Philadelphia; "Adjustment of Radiation for Various Physiological Effects," by Russell H. Boggs, Pittsburg; "Three Cases of Meningocele that Recovered," by G. W. Guthrie, Wilkesbarre; "Treatment of Empyema, with Special Reference to Irrigation of the Pleural Cavities," by P. Y. Eisenburg, Norristown; "Neglected Incomplete Rupture of Perineum and Its Cure," by J. C. DaCosta, Philadelphia; "Appendicitis," by Chas. H. Ott, Sayre; "Benign Stenosis of Pylorus and Duodenum Resulting from Spasm and Abdominal Adhesions," by Albert Bernheim, Philadelphia; "Symptoms and Diagnosis of Cancer of Stomach," by J. J. Gilbride, Philadelphia.

## NORTH BRANCH PHILADELPHIA COUNTY MEDICAL SOCIETY.

*Regular Meeting, held Sept. 19, 1905.*

The President, DR. A. BERN HIRSH, in the Chair.

### Important Changes in the Pharmacopeia.

DR. E. Q. THORNTON detailed changes in names, strength, dose, etc.

### The Medical Chemistry of the Pharmacopeia.

DR. HENRY LEFFMANN discussed the use of the Pharmacopeia to the physician, to the analytical chemist and to the druggist, and felt that one effect of giving the dose of the various remedies would be to encourage the putting up of medicines by druggists without a physician's prescription. One point he viewed with disfavor was the adoption of an atomic body based on the hydrogen one system, instead of the oxygen 16 system, which he viewed as particularly unfortunate because of the fact that the oxygen 16 system was the one on which all the statistics of the Bureau of Agriculture were furnished. Another point which he viewed with disfavor was the introduction of a large number of manufactured substances, or substances made by the combination of other drugs. He objected to the use of the genitive case for the names of chemical solutions, such as carbonate of soda, and traced the origin of these terms from the French language in the latter part of the eighteenth century. He referred to the unnecessary complications caused by the distinction between ordinary water and distilled water and the test for nitrites in distilled water, which he said was of such a delicate nature that it was not practicable, particularly with the general practitioner. He particularly deprecated the introduction of the liquor antisepticus and headache powders, but commended the changes from hydrochlorate to hydrochlorid, and the changes from naphtol and naphthalin to betanaphtol and naphthalene.

DISCUSSION.

DR. HENRY S. WIEDER referred to the difficulty of the physician becoming associated with the changes in strength, etc., by the new Pharmacopeia, and asked what method was adopted for informing them in this direction.

DR. FRANK C. HAMMOND referred to a case in which he had ordered tincture of lobelia, writing his prescription in accordance with the new edition, which produced severe and persistent vomiting, and on inquiry, he learned that the druggist had filled it according to the old Pharmacopeia.

DR. W. HERSHEY THOMAS asked which method would be pursued by the druggist in filling prescriptions given before the new Pharmacopeia was adopted.

DR. ELLIS E. GIVEN stated that he had been informed by a druggist that he had filled all prescriptions dated before September 1, according to the old Pharmacopeia, including renewals put up after that date, and that all prescriptions subsequent to that would be put up under the new Pharmacopeia.

DR. A. BERN HIRSH stated that he had been informed by a druggist in his vicinity that he intended to use the system outlined in the 1890 Pharmacopeia for some time to come. He felt that the change had been sprung on the profession too suddenly and that mention should have been made of it, and notice given through the prominent medical journals in order to permit the physician to familiarize himself therewith.

DR. HENRY LEFFMANN, in speaking of the criminal liability of druggists not compounding prescriptions according to the U. S. Pharmacopeia, referred to a decision of the Supreme Court of Ohio in a prosecution brought after the 1890 revision of the Pharmacopeia had come out in 1893. It was decided that an act of the legislature could have no reference to an edition of the Pharmacopeia published after the act was passed, and therefore the conviction could not be sustained.

DR. E. Q. THORNTON stated that he felt the reason that the Pharmacopeia was so little representative of the medical profession was because so few of the physicians appointed attended the convention for revision. In regard to the changes he stated that it must be remembered that it becomes necessary to throw out obsolete drugs and the only way he knew for physicians to become familiar with the Pharmacopeia was to have it in their libraries. He stated that Bulletin No. 23, recently issued by the Treasury Department, Marine Hospital Service of the United States, entitled "Changes in the Pharmacopeia," is of much value. The mere fact that a drug is mentioned in the Pharmacopeia, he said, does not necessarily signify, either that it is of value, or that it is endorsed by those engaged in the preparation of the work, but that there is a demand for it.

DR. A. BERN HIRSH suggested the advisability of separating the drugs from the combinations and inserting them under separate headings. He also felt that in future revisions it would be best to have at least one-half of the committee consist of active practitioners.

## *Therapeutics*

**[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]**

### Gastric Ulcer.

*Merck's Archives* quotes from Friedenwald's article on the medical treatment of this disease. The patient should be put at rest in bed for from two to five weeks, depending on the severity of the symptoms. The patient should also be kept strictly on a liquid diet mainly of milk. The rest in bed and

rigid diet assist in the healing of the ulcer, guard against perforation and hemorrhage and, because of the lessened amount of nourishment required, the diseased stomach is not too severely taxed. The author then describes the diet and other treatment in detail: First, milk with lime water, gradually reaching from one to two quarts in twenty-four hours; then strained barley or oatmeal broth clear, or with broken-up egg; then a soft diet, such as rice cooked in milk, milk toast, or soft boiled eggs. At the beginning of the fourth week solid food may be given in the form of raw scraped beef, stewed chicken, boiled sweetbreads, baked potatoes, etc. Hot poultices are applied to the abdomen for several weeks during the early part of the treatment and from 200 to 300 c.c. of hot Carlsbad water are taken morning and evening. In the severe types of ulcer which are accompanied by excessive nausea, vomiting especially of blood, and pain, no nourishment should be given by mouth for from five to ten days. During this time the patient is fed by nutrient enemata. Bits of crushed ice may be allowed to aid in allaying the thirst. According to the recent investigation of Boas in cases of ulcer, small, invisible hemorrhages frequently occur, which can be detected only by special chemical examinations (the guaiac or aloin tests) of the fecal discharge. By means of these examinations for "occult hemorrhages" one is enabled to establish the individual term of treatment, dismissing the patient only when repeated tests fail to disclose further occult hemorrhages. An exclusive milk diet is objectionable because it does not successfully combat the anemia. For this reason Fütterer recommends the juice expressed from five pounds of beef to be taken daily to combat this condition. Lenhartz, too, has recently cautioned against the strict abstinence diet in the treatment of ulcer, even in those instances in which there is hemorrhage. He bases his conclusions on the fact that since ulcer of the stomach is frequently accompanied by superacidity and also by a generally enfeebled condition, it is best to give proteid food early to overcome the acidity as well as to build up the system. He gives eggs and milk ice-cold and in teaspoonful doses, raw scraped beef, zwieback, raw ham, butter, sugar, milk cooked with rice. In the mild cases of ulcer of the stomach the author recommends an ambulatory form of treatment. The patient is permitted to take only liquid or semisolid food and is then given one of the three following methods of treatment:

1. Nitrate of silver is prescribed in a solution of 1/6 to 1/3 gr. (.01-.02) doses for a period of three weeks.

2. Bismuth subnitrate may be administered in large doses (one teaspoonful) three times a day. Fleiner recommends giving it suspended in water, after previous lavage of the stomach. After the stomach has been thoroughly cleansed, from 10 to 20 gm. (ʒiiss to ʒv) of bismuth subnitrate, suspended in from 100 to 200 c.c. (ʒiiiss to ʒvii) of water, are passed into the stomach through the tube, after which the patient is required to lie on his right side for half an hour. In those instances in which there is any contraindication to the use of the tube Fleiner advises the administration of 10 gm. (ʒiii¼) of bismuth subnitrate suspended in a glass of water in the morning before breakfast.

3. The oil cure has been recently recommended by Cohnheim in the treatment of ulcer of the stomach. Olive oil is taken three times daily from half to one hour before meals, in wineglassful doses in the morning, and in dessertspoonful doses at noon and in the evening. In very mild cases an emulsion of sweet almonds may be substituted for the oil. The oil fulfills several indications. It forms a coating over the stomach and thus assists in overcoming pylorospasm, and by relieving friction it overcomes pain; it checks the excessive secretion of acid, and improves the general nutrition. The treatment of a number of special symptoms is referred to.

SPECIAL SYMPTOMS.

*Hemorrhage.*—In all cases of hemorrhage, absolute rest in bed must be insisted on; an icebag should be placed on the epigastrium and a hypodermic injection of morphin administered. Hypodermic injections of ergot or gelatin—100 gm. (ʒxxvi) of a 2 per cent. watery solution may be used. Recently Einhorn has recommended the hypodermic injection of a syringeful of adrenalin chlorid, 1 to 2,000 twice daily, or the internal administration of 15 drops of the same solution three times daily. In cases of great weakness or actual collapse from hemorrhage, saline infusions must be resorted to.

*Acidity.*—For the relief of the acidity, which is a usual accompaniment of ulcer of the stomach, it is frequently necessary to administer alkalies alone or combined with belladonna or codein.

*Constipation.*—This symptom may be relieved by the use of enemata or by the internal administration of oil or Carlsbad water.

When is an ulcer healed? may be answered in the affirmative when there is an entire absence of pain after taking solid food; when there is no longer pain on pressure in the epigastric region, and, finally, when repeated tests fail to reveal further "occult hemorrhages" in the fecal discharge.

INDICATION FOR SURGICAL TREATMENT.

1. Perigastric adhesions accompanied by tumor formation.
2. Hemorrhages which are very profuse, occurring at short intervals, or even small frequent hemorrhages which are not relieved by medical means.
3. Persistent nausea and vomiting, which is not relieved by the rest treatment or by a strict abstinence cure.
4. Ulcer of the stomach, recurring at shorter or longer intervals, notwithstanding a proper rest or abstinence cure.

## Dyspepsia.

Hutchison, in the *Practitioner*, states that in acute catarrh of the stomach the principal thing is to give the inflamed organ rest. No food should be given when vomiting exists. Thirst is relieved by sips of hot water or by pieces of ice held in the mouth. Stimulation may be necessary if depression is present. Champagne is one of the best forms in which to administer it. Rectal feeding is resorted to only in cases of persistent vomiting. A return to the ordinary diet is made after the symptoms subside. In the chronic form of gastritis it is necessary to avoid irritation of the mucous membrane of the stomach either mechanically or chemically. All crude and coarse articles, therefore, must be forbidden, such as the stones or skins of fruits, whole meal bread or oatmeal and tough meats. Mustard, spices, pepper and condiments of all sorts fall under the head of chemical irritants and are, therefore, injurious, and so is alcohol, especially in its most concentrated forms. Sugar, especially cane sugar, is also harmful, as it is a potent excitant of mucous secretion. Most fatty substances, especially cooked fats, are injurious, but butter and bacon fat can usually be eaten in moderation. Care should be taken that the food is finely divided, eaten slowly, and but little consumed at a time. The following schedule would represent a diet suitable for an average case:

*Breakfast.*—Lightly cooked eggs, white fish (boiled), but not mackerel or herring, a little crisp bacon (not too fat), fowl or game, hard, dry toast, with a little butter (no marmalade), a small cup of tea, with milk but no sugar.

*Luncheon.*—Lean mutton, roast beef or white fish, etc., as at breakfast; a spoonful of mashed potato, with a little spinach or cauliflower; dry toast or a rusk or two; custard pudding or sweetened jelly, and a glass of alkaline mineral water.

*Dinner.*—A very little clear soup free from fat, white fish (boiled), without sauce; meat as at luncheon, or a little sweetbread; vegetables, as at luncheon; custard, jelly, or stewed fruit (free from skins and stones), or a little plain milk pudding; dry toast; no savory or dessert; a glass of mineral water; no coffee.

## Pepsin.

Chase, in the *Boston Medical and Surgical Journal*, discusses the therapeutic value and the indications for the use of pepsin in diseases of the stomach. The important question is, In what disease of the stomach is pepsin indicated? In answer to this, the author states: "In all gastric affections, regardless of their cause, in which free HCl is present, pepsin is not indicated, because after proper acidulation of the gastric juice it becomes active, showing that pepsin is still present. These two classes of gastric disorders comprise over 90 per cent. of all stomach affections, and in their treatment pep-

sin is never indicated. In all cases of atrophic gastritis and achylia gastrica and in some cases of cancer of the stomach, both HCl and pepsin are lacking. As a result there is a true indigestion of certain foods in the stomach." Pepsin is active only in the presence of a certain amount of HCl. Chemical examination of the gastric juice is necessary in order to determine accurately any deficit of HCl. The theory has been accepted that HCl and pepsin given by mouth would take the place of those agents when they are lacking in gastric juice. In practice it has been found they do not. Of the use of pepsin the author quotes the following opinions:

*Einhorn:* "Pepsin used to be and is yet frequently given in combination with HCl. Most writers, however, concur in the absolute inefficacy of this drug, and for two reasons: 1. In the most instances, even of the diminished secretion, there is yet an abundant quantity of pepsin present. 2. Most pepsins in the market do not, by any means, show as strong digestive properties as the true pepsin of the stomach. Of late years I have entirely abandoned the use of pepsin."

*Ewald:* "Pepsin was for a long time regularly prescribed with HCl with the pernicious idea that if it did not help it certainly did no harm. Its use should be restricted to those cases in which an absence can be proven."

*Riegel:* "In general, the administration of pepsin is rarely indicated. The digestion of albumin is rarely improved by the administration of the hydrochloric acid, even if large doses are given together with pepsin. This is due to the fact that the quantity of HCl that we can administer is very much smaller than the quantity needed to make up the deficit of HCl in the gastric juice."

Chase believes that the best therapy is obtained by a stimulation of the function of the stomach rather than by a useless or even successful attempt at their substitution.

## Medicolegal

**Restriction on Sale of Cocain.**—Chapter 203 of the Laws of Nebraska of 1905 provides that no apothecary, druggist or other person shall be permitted to sell or give away any quantity of cocain, except on the prescription of a physician, said prescription not to be refilled, provided that nothing in this act shall prohibit sale from manufacturers or wholesale dealers to retail druggists, physicians or dentists, nor the use and prescription of this drug by dentists in the practice of their profession. Every person offending against the provisions of this act shall be fined not less than $20 nor more than $100.

**Physicians and Internal Revenue Special Tax.**—"Can a physician, not having a revenue license, and furnishing his own medicines, prescribe alcohol or whisky for his patients, without violating the internal-revenue laws?" The answer of the United States Commissioner of Internal Revenue to this question is, as per ruling of Oct. 13, 1905: He can not prescribe and furnish to his patients alcohol or whisky, or any other alcoholic liquor not compounded into a medicine by admixture with drugs or medicinal substances, without involving himself in special-tax liability under the internal-revenue laws, even though he thus sells such liquor for use as medicine only.

**Restrictions on Marriage.**—Chapter 126 of the Laws of Indiana of 1905 provides that no license to marry shall be issued where either of the contracting parties is an imbecile, epileptic, of unsound mind or under guardianship as a person of unsound mind, nor to any male person who is or has been within five years an inmate of any county asylum or home for indigent persons, unless it satisfactorily appears that the cause of such condition has been removed and that such male applicant is able to support a family and likely to so continue, nor shall any license issue when either of the contracting parties is afflicted with a transmissible disease, or at the time of making application is under the influence of an intoxicating liquor or narcotic drug. If persons resident of the state, with intent to evade these provisions, go into another state and there have their marriage solemnized with the intent of afterward returning and residing in Indiana, and do so return and reside in Indiana, such marriage shall be void and such parties shall be subject to all the penalties provided for in this act.

**State Laboratory of Hygiene—Adulteration Formulas.**—Chapter 38 of the Laws of Indiana of 1905 provides for the establishment of a state laboratory of hygiene as a department of the state board of health. It shall be at Indianapolis and shall be used for making analyses of foods and drugs for the purpose of enforcing the pure-food and drug laws, for making sanitary analyses, pathologic examinations and studies in hygiene and preventive medicine, to aid in the enforcement of the health laws. All work done in it shall be done exclusively for the public benefit, and no fees shall be charged. For the conduct of the state laboratory of hygiene the state board of health shall appoint a superintendent other than the secretary of such board of health, and such superintendent shall have charge of and superintend and manage such laboratory. He shall be learned and skilled in bacteriology and pathology, and shall receive a salary of not to exceed $2,000 per annum. The state board of health shall also employ a skilled chemist, whose salary shall not exceed $1,500, and both appointees shall be temperate, healthy, well recommended and of good moral character. Another provision of this act is that any person who shall sell, offer for sale or give away, barter or trade any receipt or formula for the adulteration or imitation of food, or teach or offer to teach any method or means of adulterating any article of food or means of producing or manufacturing any imitation of any article of food within the state of Indiana shall be guilty of a misdemeanor, and on conviction thereof shall be fined any sum not exceeding $1,000, to which may be added imprisonment in the county jail not exceeding six months.

**Registration of Vital Statistics.**—Chapter 98 of the Laws of Nebraska of 1905 provides for a state registration of vital statistics. It provides that the undertaker or person in charge of the funeral of any person dying in the state shall cause a certificate of death to be filled out with all the particulars contained in the standard blank adopted by the United States Census Bureau, including a statement of the cause of death, made by a person holding a valid license as provided in Section 7, Article 1, Chapter 55, of the compiled statutes of the state for 1903, who was last in attendance on the deceased; or, in his absence or default, by the local health officer or coroner. Said certificate shall show clearly the course of disease or sequence of causes ending in death. A certificate of the standard form adopted by the United States Census Bureau shall be made out by the physician or other person attending the birth of every child born in the state, or, in default of such person, by the parent, etc., and filed with the local or subregistrar within three days from and after such birth. In case a child is born dead, both birth and death shall be reported, and the month of uterogestation shall be stated as nearly as possible by the attendant. The state registrar shall supply all necessary blanks, forms and instructions to the local registrars, and through them to physicians, etc. Any physician or other person violating the provisions of this act, or failing properly to register a birth or death as herein required, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than $10 nor more than $100, or be imprisoned for not more than 60 days, or be subject to both fine and imprisonment.

**Dipsomaniacs and Persons Addicted to Narcotics.**—Chapter 82 of the Laws of Nebraska of 1905 provides that dipsomaniacs, inebriates and persons addicted to the excessive use of morphin, cocain or other narcotic drugs shall be admitted, detained, cared for and treated in the Nebraska Hospital for the Insane. If, on investigation, the commissioners of insanity shall find the information filed to be true, they shall impose a sentence of detention in the hospital until the patient is cured, not exceeding three years. The patients shall be placed in a separate ward at the hospital, and shall be given such method of treatment as is deemed best to eliminate the effects of alcohol or narcotic drugs and to build up the system physically and mentally and which will tend to strengthen the moral character of the patient and enable him or her to resist the temptation to use alcoholic or narcotic drugs. Any patient whom the superintendent of the asylum believes to be cured may be

paroled, conditioned on the patient's signing a written pledge agreeing to refrain from the use of all intoxicating liquors as a beverage and from the use of morphin, cocain and narcotic drugs during the term of his commitment and shall avoid frequenting places and the association with people tending to lead him to the use of the same. And such paroled patient must make written reports to the superintendent on the first day of each month, on blanks to be furnished for the purpose, to the effect that he has not during the past month, in any respect, violated any of the terms of his parole, which report must be investigated and approved by the clerk of the commissioners of insanity of the county in which the patient resides, who may demand from such patient satisfactory evidence as to the truth of his report. If, at any time, a patient on parole shall fail to make said report, or shall fail, in any respect, to fulfill all of the conditions on which said parole was granted, he may, without any further proceeding whatever, and on the written order of the superintendent of said hospital, be taken and returned to said hospital, there to be detained and treated as provided herein.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

#### American Medicine, Philadelphia, Pa.

*October 21.*

1 *General Considerations on the Pathology of Smallpox. W. T. Councilman, Boston.
2 Amputation at Hip Joint; Report of Four Cases by Wyeth's Method. J. S. Horsley, Richmond, Va.
3 *Scheme for the Sanitary Control of the Municipal Milk Supply. G. W. Goler, Rochester, N. Y.
4 *Review of a Year's Work in Appendicitis. A. H. Traver, Albany, N. Y.
5 *Disorders of Sleep. J. S. Christison, Chicago.
6 *Limitation of the Principle of Privileged Communications. A. L. Benedict, Buffalo.

1.—See abstract in THE JOURNAL, Oct. 14, 1905, page 1190.

3. **Scheme for the Sanitary Control of the Municipal Milk Supply.**—Goler advises the establishment of a bureau of milk inspection, of which the chief sanitary officer is the head, and through whom licenses are issued for the vending of milk in the city. Boards of physicians and scientists appointed by medical societies should compile rules for the production and distribution of milk of higher nutritive value and lower bacterial content than ordinarily good city milk. Directly, or through the inspectors of the bureau of milk inspection, or through inspectors appointed by the commission itself, they should insure: (1) Character of stable and feed of cattle, health of milkers and care of utensils. (2) A negative tuberculin test. (3) A bacterial standard, not greater than 10,000 bacteria per cubic centimeter. (4) A nutritive value of 12.5 per cent. of solids, of which 4 per cent. must be fats. The necessity for the organization of the milk work for a municipality under one executive head having the license power can not be too strongly emphasized, for by this means only may the producer and the vendor be under sanitary control. When such laws are enacted for any municipality as will make it an offense punishable by fine or imprisonment to bring milk into the city that has not had the seal of sanitary approval set on it, and everything with which it comes in contact, our children and ourselves will no more be exposed to the dangers that arise from dirty, disease-bearing milk.

4. **Year's Work in Appendicitis.**—Traver reviews the cases of appendicitis under his care during the past year, and from a study of these concludes: (1) Chronic cases demand operation because an appendix once diseased does not return to its normal condition. (2) In acute cases, an early operation is demanded, as no physician or surgeon can tell how a case will terminate, and after pus is formed the golden time for an operation is already passed. (3) Cases complicated with general peritonitis give a high mortality under any treatment.

5. **Insomnia.**—Christison discusses the jerkings, shocks and hallucinations apt to occur in the initial stage of sleep; hallucinations of vision and hearing, the frequent prodrome of insanity; numbness, nightmare, convulsions, somnambulism and choreic jerkings which are apt to occur during sleep or on waking.

6. **Limitation of the Principle of Privileged Communications.**—According to Benedict, the adoption, as a rule of ethics, of the principle that all professional communications should be absolutely privileged goes further than the underlying principle of protection of weak and erring humanity, and may extend so far as to involve the physician as *particeps criminis*, in a social if not a legal sense. The underlying consideration on which professional secrecy is based is not that the physician belongs, body and soul, to every sick or injured man who appeals to him for assistance, but that the physician should be a negative quantity, so far as the social or legal punishment of sin or discredit is concerned. When a patient, after being warned and expostulated with, deliberately decides to transmit disease, to defraud a victim, to endanger lives, professional secrecy should no more be required of the physician than is the concealment of a case of quarantinable disease for the sake of the selfish interests of the patient.

#### Medical Record, New York.

*October 21.*

7 *A Plea for Local Anesthesia in the Radical Cure of Inguinal Hernia. J. A. Bodine, New York.
8 *Etiology of Tabes; Its Social, Legal and Therapeutic Consequences. F. Von Raitz, New York.
9 *Eye Defects Associated with the Development of Puberty. K. K. Wheelock, Ft. Wayne, Ind.
10 *Diagnosis in Carcinoma of the Stomach. E. F. McIntosh, New Haven, Conn.
11 The Whitman Method of Treatment of Fracture of Neck of Femur. F. E. Ascheroft, Deadwood, S. D.

7. **Local Anesthesia in Radical Cure of Inguinal Hernia.**—Bodine has operated on 284 patients, with 300 hernias, under local anesthesia, without a death or suppurating wound. By means of Schleich's infiltration method the amount of cocain is reduced to a minimum and limited to a small area, producing acute local anemia, effectually retaining the fluid in one spot. Cocainization of a sensory nerve trunk, abolishing pain sensation in the region supplied by it, renders it possible to operate for hernia by its use. The operative area is superficial, and the region restricted by the anatomy of the parts. In strangulated hernia, local anesthesia does not increase the shock, while general anesthesia is often too great a load to be borne. The local anesthetic permits of the application of hot towels to a possibly gangrenous intestine for some time, in order to determine whether it will react. The operation does not give rise to the danger of injury to the nerve fibers. The danger to a line of deep sutures from vomiting is done away with. There is no danger of cocain poisoning with the small dose necessary—that is, one-half grain injected intermittently throughout an hour. Morphin given after the operation would act as an antidote were poisoning possible. The operation is more thorough because of the absence of haste and the lack of need to save the patient pain. There are no evidences of pain during the operation. The cocain solution should be made fresh. The solution is 0.2 per cent. for infiltration of skin and nerve trunks, and for subdermic infiltration half this strength is used. The line of skin incision should be infiltrated throughout its extent sufficiently tightly to maintain the local anesthesia for an hour. The aponeurosis of the external oblique requires no infiltration. It should be incised over the situation of the underlying ring; the ilioinguinal nerve will be exposed by retracting the flaps, and its trunk is then cocainized by a few drops of the solution. The incision may be carried painlessly into the external ring, and the flaps reflected to expose Poupart's ligament and the conjoined tendon. The iliohypogastric, if found, may be cocainized. The margins of the internal ring are infiltrated. A line of infiltration along the long axis of hernial protrusion permits a clear cut through the hernial sac and coverings. The neck of the sac is infiltrated, dissected away from the underlying cord, ligated, and amputated. The genitocrural nerve is cocainized. The sac is dissected away from the cord, and the operation is completed. Operation on the female is easier than on the male, because the round ligament is less sensitive than the cord.

8. **Etiology of Tabes.**—Von Raitz attacks the view that tabes is caused by syphilis, and points out the injustice from social, legal and therapeutic standpoints that is caused to

patients by this assumption. He says that those who accept syphilis as the cause of tabes have no difficulty in finding syphilitic evidence in everybody who has tabes. If a patient admits having had syphilis, no further proof is necessary; if syphilis is denied, every disturbance at the genitals, no matter whether it be a specific or a simple urethritis, a vulvar abscess or abrasion, a chancroid or a simple sore, is sufficient evidence of syphilis. If disturbances at the genitals are denied, then any eruption on any part of the body furnishes the proof. And if everything is denied, then the "benefit of the doubt" is used to establish syphilis, and so the hundred per cent. is accounted for and tabes stands as a postsyphilitic disease. He then contrasts the pathology of syphilis and that of tabes, to show that the lesions of the nervous system in the two conditions have nothing in common, the degenerations of the latter disease being foreign to the former. It is also absurd to believe the syphilitic virus can remain dormant, and, furthermore, if tabes were a postsyphilitic disease antisyphilitic treatment would have a curative effect, but it has been found that the reverse is the case. Von Raitz believes that tabes is the result of various etiologic factors, prominent among which are sexual excess, toxins of various sorts, injury to the cord by falls, twists, etc., and the use of mercury.

9. **Eye Defects Associated with Puberty.**—Wheelock describes seven cases of defective vision occurring in boys and girls shortly before the age of puberty. They are characterized by great loss of vision, marked limitation of the visual field, and an eye ground varying from the normal to frayed blood vessels with a "shot silk" fundus, while the general health of the patient remains good. These phenomena he believes are due to change in the nerves and blood streams incidental to the development of the reproductive organs, as treatment is of little avail and recovery is not complete until menstruation has been established in girls and the seminal function in boys. Points Wheelock particularly emphasizes are: The existence of defective vision for distance and reading, limitation of the field for form and color, the age of the patients from 8 to 10 years, the absence of chlorosis or hysteria, the existence of a leucocytosis, and the recovery of normal sight both for reading and distance with much contracted field. The treatment involves restoration of hemoglobin and nerve force by iron, strychnin and manganese. The author suggests that there may be some connection between this condition and chorea.

10. **Diagnosis of Carcinoma of Stomach.**—McIntosh, in discussing the difficulties attending the early diagnosis of carcinoma of the stomach, in order to show the unreliability of symptoms, cites two cases in which complete recovery under non-surgical treatment followed in spite of the fact that several consultants had expressed the opinion that malignant disease was present. He says that the life of a gastric carcinoma may be divided into three periods: 1, From inception to the appearance of an exudate; 2, from the beginning of the exudate to the breaking down of the neoplasm; 3, from the breaking down of the neoplasm to death. Measures intended to enable the diagnosis to be made during the first period are impracticable, but the earlier in the second stage the nature of the disease is recognized the better are the patient's chances of cure. McIntosh describes the tests for detecting occult blood in the stools, and mentions such newer methods as Salomon's albumin test, Gluzinski's test, and the estimation of fatty acids in the urine. If HCl is absent, lactic acid is present, and there is inability to digest albuminous food, a diagnosis may be made even if no tumor can be felt. The diagnosis should be made from several examinations rather than from a single one, and this is especially true of chemical examinations of the stomach contents. For example, in stenosis of the pylorus due to a cicatrix from a former ulcer there may be the following symptoms: Cachexia, emaciation, ectasia, a decided tumor, and quite likely hematemesis. These are very suggestive of carcinoma, but the examination of the stomach contents reveals a large amount of free hydrochloric acid and no lactic acid. In this class of cases an examination should be made every week to ascertain if there is any change in the constituents of the stomach contents; the whole matter will hinge on this very point, and if there is no substantial change the diagnosis is pyloric stenosis, but of a benign nature. If there is progressive decrease in the HCl and development of lactic acid, with weakened albumin digestion, it is carcinoma. A reliable diagnosis can never be made from one symptom.

### St. Louis Medical Review.

*October 21.*

12 *The Cradle. J. Zahorsky, St. Louis.
13 *Retroperitoneal Teratoma. C. M. Nicholson, St. Louis.

12. **The Cradle.**—Zahorsky protests vigorously against the fashion of using no cradle for pacifying children. He considers the cradle a hundred times less objectionable than the modern devices which have been forced in place of it, such as the rubber pacifier, soothing syrups, etc. He urges that the cradle be returned to the nursery, especially in those homes where no nurse or nursery maid attends the baby. He considers the cradle one of the best therapeutic agents for a nervous baby or a sick one. It is easier on the mother and it is far preferable to the pacifier or paregoric. The irritability and peevishness in infants vary to such an extent that ordinary rules in regard to hygiene and management must often be very much modified. Here is where the cradle can be used to advantage. Zahorsky says that the signs of the times are that the cradle will again come into fashion; meanwhile the physician will do well to remember this well tried soothing agent for peevish children when ordinary means fail.

13.—See abstract in THE JOURNAL, Oct. 28, 1905, page 1352.

### Boston Medical and Surgical Journal.

*October 19.*

14 Two Cases of Bilateral Birth Paralysis of the Lower-Arm Type. J. J. Thomas, Boston.
15 Consumption in a Massachusetts Town. E. P. Joslin, Boston.
16 Sugar in the Cerebrospinal Fluid of Diabetics. N. B. Foster, New York.
17 *Diagnosis of Cancer and Ulcer of the Stomach by the Use of Expert Methods of Clinical Procedure. H. F. Hewes, Boston.

17. **Laboratory Diagnosis of Gastric Ulcer.**—Hewes examined 160 cases of stomach disorder by the methods outlined by him in a previous paper. Of this number anatomic or pathologic diagnosis was obtained in 37. In these 37 cases the corresponding records of the clinical diagnosis made previous to operation and of the anatomic diagnosis or pathologic made at operation or postmortem were as follows: In 18 cases clinical and pathologic diagnoses of cancer were made in all. In 12 cases diagnosed clinically as ulcer, the pathologic diagnosis was ulcer in 11 cases and cancer in 1 case. In 1 case a clinical diagnosis was made of gastrectasis, probable cause cancer or ulcer; a pathologic diagnosis was made of adhesions about the pylorus from the gall bladder. In 1 case the cause of the symptoms was unknown; the stomach contents were normal. The pathologic findings were chronic appendicitis with enlarged mesenteric glands; the stomach was normal. In 3 cases a clinical diagnosis of neurosis was made, there seemed no cause for operation. Pathologically no lesion of the stomach was found. One patient with hypoacidity was operated on for ventral hernia and explored for possible cancer; the stomach contents were normal except for hypoacidity; pathologically the stomach was found intact. That is, in 31 cases of stomach disorder in which the clinical findings pointed to the existence of cancer or ulcer of the stomach and in which such a diagnosis was definitely made from the findings, one of the two lesions was found present in all, and the diagnosis of the type of lesion was correct in all but 1 case; in 3 cases in which no cause for operation was found by clinical findings, no cause was present on operation; in 2 patients in whom the clinical findings failed to show definitely evidences of an organic lesion, but who were operated on for other reasons, no lesions of the stomach were found. Hewes says that the accuracy of the indications gained by these clinical methods of examination is still more marked if we study the testimony of the records in regard to the diagnosis of the location of the diseased conditions. These records show: In 9 cases there was a clinical diagnosis of cancer at the pylorus. The pathologic finding in these 9 cases was cancer at the pylorus in all. In 9 cases a clinical diagnosis of ulcer involving or occluding the pylorus was made; the

pathologic diagnosis in these cases was ulcer at the pylorus in 8 cases, and of cancer at the pylorus in 1 case.

### New York Medical Journal.

*October 21.*

18 The Sanatorium for Tuberculous Patients and Its Medical and Social Mission. S. A. Knopf, New York.
19 Hodgkin's Disease with a Milky Non-Fatty Pleural Effusion. D. L. Edsall, Philadelphia.
20 *Expulsion Method of Obtaining Stomach Contents for Diagnostic Purposes. F. B. Turck, Chicago.
21 Acromegaly Associated with Symptoms of Myxedema. C. L. Greene, St. Paul.
22 *New and Simple Method of Performing Rectal Valvotomy. L. J. Hirschman, Detroit.
23 Epileptogenic Myopathic Kyphoscoliosis, a Rare Condition of Muscular Deformity Due to Epilepsy. W. P. Spratling, Sonyea, N. Y.
24 Case of Congenital Varix of the Superficial Epigastric Vein and Its Anastomoses. A. H. Roth, Erie, Pa., and A. Gulde, Chelsea, Mich.
25 *A Protective X-Ray Tube. L. M. Liebermann, New York.

20. **Expulsion Method of Obtaining Stomach Contents.**—Turck believes that he has overcome the difficulties ordinarily encountered in attempting to gain the stomach contents, by the adoption of the so-called expulsion method which he has used for many years and has found to be of great practical value. A double stomach tube of special design is introduced, and by means of compressed air introduced through one compartment of the double tube the stomach is inflated and the contents are forced out through the other compartment of the tube, which is the larger, and extends deeper into the stomach. By a careful and judicious manipulation of the tube the entire stomach contents can be obtained. The aspirating bottle, designed by Turck, has the advantage of being a graduated receptacle which is ready for transportation to the laboratory. It consists of a wide-mouthed bottle, holding 300 c.c., graduated, closed with a rubber stopper with two openings, through which bent glass tubes are passed, one tube attached to an aspirating bulb and the other connected with the stomach tube. Turck employs a double tube, one small caliber tube for the inflow attached parallel to a large size tube for the outflow. This arrangement more readily conforms to the shape of the esophageal opening, which is oval, flattened in the antero-posterior diameter. The end of the smaller inlet tube reaches to the upper portion of the stomach just beyond the cardiac orifice, and is perforated with small needle-like openings or a single large opening, while the larger or outlet tube extends to the greater curvature or floor of the stomach, with large end and side openings to allow free flow of the stomach contents. When the tube is inserted into the stomach the small caliber tube is connected with a large hand compressing air bulb and air is pumped into the stomach. The tube is introduced into the patient's stomach in the usual way, requiring less difficulty rapidly to reach the stomach owing to a small wedge of solid rubber where the two tubes are united parallel to each other, which prevents kinking and delays in introducing the tube. This is very essential in nervous patients for obvious reasons. The tube being connected with the air apparatus, the air is allowed to enter the stomach, distending it. The rugæ are stretched out and a smooth surface results, and at the same time the stomach, on inflation, rotates anteriorly and upward, thus bringing the contents in contact with the end of the stomach tube, when, the air being allowed to escape, the stomach contents are carried with it into a convenient receptacle. A practical receptacle for office treatment is a bottle with a rubber stopper perforated by two holes, through which pass glass tubes. One tube is connected with the stomach tube and the other is left open to allow the escape of air from the bottle. The method can be carried out in from ten to thirty seconds. Some of the advantages enumerated by Turck are the following: The folds of the stomach mucosa are prevented from occluding the openings of the outlet tube. The air expels the contents in any desired amount, with great facility and with little distress for the patient. There is little danger of injuring the mucous membrane. It is impossible to overdistend the stomach, which can be emptied thoroughly, and the method does not prevent the use of the expression or the aspiration method in combination. The degree of force with which the air returns furnishes data of the character or tone of the muscles. The amount of air introduced under a given pressure gives an idea of capacity. By connecting with a manometer, the degree of pressure can be ascertained and the tone of the stomach wall estimated. Diagnosis between stenosis of the pylorus and atony of the stomach wall is facilitated. Patulous cardia and pylorus can be diagnosticated. When the stomach is dilated and filled with food and liquid, exciting peristalsis by introducing air and allowing it to escape again, after a brief period of waiting, may cause the stomach to empty itself, showing that retention is due to atony and not to stenosis of the pylorus. The introduction of nebulized oil, and the degree of force with which it escapes, gives valuable data of the character of the muscle walls and at the same time applies mild disinfection and stimulation to the gastric mucosa. This method combines the advantage of promptly securing the stomach contents and of inflating the stomach for outlining the organ by percussion.

22. **New Rectal Valvotomy.**—Hirschman has devised a simple technic which has proved most satisfactory in his hands. The patient is put in the knee-shoulder position, and a large operating size proctoscope is inserted after the sphincter has been prepared for it, either by gradual dilatation or by immediate divulsion following local anesthesia of the part. The ligature carrier devised by Hirschman is threaded through the eye at the curve with a rubber ligature (size 5 to 8, French scale); the ligature passes inside of the curve of the needle and should project about half an inch from the point. The needle, which is nine inches long and has a handle bent at an angle so as not to obstruct the view, is then passed up around and hooked through the highest offending valve until the point is projected and the ligature can be clearly seen. This end is then grasped by means of a long forceps and the ligature is pulled through until it is outside the proctoscope. The needle is then passed back and around the edge of the valve and is brought down also outside the proctoscope, and is then taken off the ligature. The ligature is now in place. Over the ends is slipped a lead fastener or large perforated shot, the ligature being put on the extreme stretch, the shot is grasped and pushed up to the valve tightly by means of long compression forceps and is firmly compressed. This puckers the valve and constricts it in such a way that circulation is shut off and the ligature sloughs through in from two to eight days. After the ligature has cut through, the edges retract so that a large V-shaped opening is left, which gradually retracts still further. The advantages of the method are said to be, the fact that it can be done without any anesthesia whatever; it can be done quickly, the whole operation not requiring more than ten minutes for three valves; it requires few instruments or appliances; the patient is not confined to bed; there is absolutely no hemorrhage; no stitches are required; the rubber ligature, being soft and non-irritating, does not scratch or bruise the bowel *in situ* or during its expulsion, and there is no danger of its doing damage if it should by any possibility be carried up higher into the bowel.

25. **Protective X-Ray Tube.**—The device employed by Liebermann consists of a form of tube in which the anode disc is placed within the tubular neck, or extension, which latter is covered with a lead flux glass cylinder of sufficient thickness to prevent all leakage of ionizing rays, and in which is provided an opening for the passage of such rays. In connection with this ingeniously contrived tube a set of lead glass specula —of two sizes—serve to localize completely the volume of escaping *x*-rays, and thus render the interposition of lead foil protective entirely unnecessary. This lead glass speculum serves as a collector and director of the ionizing rays excited within the tube, acting at the same time as a tubular diaphragm.

### Medical News, New York.

*October 21.*

26 *Pericardial Effusions. F. A. Jones, Memphis, Tenn.
27 *Antitoxin for Poisonous Mushroom Intoxication: A Preliminary Communication. W. W. Ford, Baltimore, Md.
28 Diagnosis and Treatment of Anemia. H. Brooks, New York.
29 Different Conditions in Tuberculous Kidney and Their Treatment. C. L. Gibson, New York.
30 *Bacterial Treatment of Sewage and Its Adaptability to Small Communities. R. F. Palmer, Roosevelt, Arizona.
31 *Study of the Results of Abdominal Hysterectomy for Fibroids of the Uterus, with and without Drainage. J. Brettauer, New York.

26. **Pericardial Effusions.**—Jones discusses the clinical history of this affection and emphasizes the importance, as a diagnostic aid, of eliciting flatness on percussion in the fifth interspace to the right of the sternum. He cautions against confusing a flat note on percussion with the dull note. In all cases of suspected pericarditis the physician should watch carefully with reference to the developing effusions.

27. **Antitoxin for Mushroom Poisoning.**—Ford has prepared an antitoxin from the various varieties of poisonous mushrooms. His method is as follows: The fungi are dried in the sun and an extract made later by macerating them in water, expressing them between folds of linen cloth, filtering through ordinary filter paper, then through a Berkefeld filter under pressure. As thus prepared the extract is a thin, dark brown fluid which may be kept almost indefinitely without losing its toxic properties. The toxic principle contained in this extract, known since Kobert's time as phallin, is strongly hemolytic. When brought to isotonic solution by the addition of requisite amounts of NaCl it quickly dissolves the erythrocytes of man, cattle, swine, sheep, goats, rabbits, dogs, guinea-pigs, hens and pigeons. Heated to 65 C. it loses this property completely, and the capacity of dissolving the corpuscles is not restored by the addition of serum, lecithin, cholesterin, milk, or any other substance which has thus far been tried. The hemolytic principle thus belongs to the category of bacterial hemolysins, and not to the serum hemolysins. This extract is very poisonous to small animals. Following the injection of fatal quantites subcutaneously, in both rabbits and guinea-pigs, there is an extensive subcutaneous edema with hemorrhages in the lymphatic glands, in the serous membrane, and in the internal organs, especially the liver and kidney. The heart always stops in diastole, and the blood may be fluid if the dose has been large. Death occurs usually within four or five days, although it may occur after the lapse of two or three weeks, owing probably to degenerative changes in the liver and kidney. If rabbits be treated with repeated small doses of phallin subcutaneously, followed by large doses intraperitoneally, it is possible to immunize them against the action of multiple toxic doses. The mortality among animals so treated is very great, but successful results have been thus far obtained with five or six rabbits. These animals were eventually able to withstand the injection of about five times a fatal dose and their blood serum exhibited definite antihemolytic and antitoxic properties. The strongest serum thus obtained will neutralize the hemolytic principle of phallin in a dilution of 1 to 10,000, using as an index of hemolysis the quantity of phallin just sufficient to dissolve 1 c.c. of a 5 per cent. solution of rabbit's blood. The same serum possesses antitoxic properties in a dilution of 1 to 10, 0.5 c.c. completely neutralizing five times the fatal dose for rabbits.

30. **Disposition of Sewage in Small Communities.**—Palmer describes the syestem of sewage in operation at the geological survey camp at Roosevelt, Ariz. It consists of a septic tank, followed by a continuous trickling filter. Approximately 3,000 gallons of sewage pass through the tank and filter in twenty-four hours. The tank is of concrete floor and sides with a board roof covered with earth. It is 40 feet long, 8 feet wide and 3 feet deep, and divided into three compartments by two walls. It has a capacity of about 3,600 gallons, so that the sewage remains in the tank between twenty-four and thirty hours. The inlet to the first compartment is by a six-inch pipe, connected with the main sewer, one foot below the surface of the fluid when the tank is full. This compartment is the grit chamber and measures 5x8 feet and is 6 feet in depth. From here the sewage passes through an opening in the dividing wall one foot beneath the surface into the septic chamber 8x30 feet and 3 feet deep. In this compartment are a number of partitions extending alternately from either side of the tank and extending nearly across. These partitions retard the flow of sewage and permit of greater fermentation. The sewage now passes through another opening one foot from the surface into a small compartment, from which the effluent overflows at the top into a four-inch iron pipe, and is conducted by it to the distributor. The distributor consists of a box 4 inches square and 3 feet long, with eight cross sticks passing through. These cross sticks are grooved on top, and, as the effluent rises in the box to the level of the grooves, it passes out and flows over the sides of the cross sticks and drips on the surface of the filter. The filter is a wood frame 1 yard square and 10 feet high, placed on a slanting concrete floor. The sides of the frame are latticed so as to give plenty of air. The filling material is of small boulders between two and three inches in diameter. On the floor is a collecting drain which leads by a short outflow pipe to the power canal.

31. **Drainage in Abdominal Hysterectomy for Fibroids.**—The study of the value of drainage in abdominal hysterectomy for uterine fibroids was undertaken by Brettauer with a view to ascertaining the difference in the immediate results of abdominal hysterectomy on the comfort, rapidity of convalescence, and general condition of the patient, in those cases in which drainage through the vagina was instituted, and in those in which it was omitted. Of the 54 operations discussed, 32 were performed with gauze drainage through the cervix and 22 without. Brettauer found that there is not the slightest difference in the immediate postoperative course whether drainage is practiced or not, although he considers it preferable to sew up the abdomen in all cases so as to assure a more perfect hemostasis.

### Lancet-Clinic, Cincinnati, Ohio.

*October 21.*

32 School Life in Relation to Health. P. Zenner, Cincinnati.
33 *Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen. J. Y. Brown, St. Louis.

33.—See abstract in THE JOURNAL, Nov. 28, 1903, page 1371.

### California State Journal of Medicine, San Francisco.

*October.*

34 President's Address, Pacific Association of Railway Surgeons. N. H. Morrison, Los Angeles.
35 Early Operation of Gallstone Disease. E. Rixford, San Francisco.
36 Surgical Treatment of Pancreatic Complications in Gallstone Disease. A. S. Lobingier, Los Angeles.
37 *More Simple Technic in Herniotomy. O. O. Witherbee, Los Angeles.
38 Case of Erythema of Multiformis. A. Garceau, San Francisco.
38½ Central Abscess of Otitic Origin. H. Hastings, Los Angeles.
39 Hopes, Disappointments and Successes of the State Board of Health. N. K. Foster, Sacramento.
40 Spastic Paraplegia. A. M. Henderson, Sacramento.
41 Fibromyoma of the Uterus and Bladder, with Calcification and Ossification. W. S. Thorne, San Francisco.
42 Adenoids from the Standpoint of the Parent and the General Practitioner. R. L. Dolg, San Diego.
43 Acute Chylous Mesenteric Cyst. H. B. Reynolds, San Francisco.
44 Chronic Suppuration of the Middle Ear in Relation to the Whole Number of Ear Affections, with Special Reference to Operative Cases. C. F. Welty, San Francisco.
45 *Interdental Splint for Fractures of the Lower Jaw. R. Russ, San Francisco.
46 Misuse of Atropin in Eye Diseases. L. C. Deane, San Francisco.
47 New Birth Certificate Blank; Its Imposition, Necessity and Correction. G. E. Abbott, Pasadena.
48 Case of Atypical Rheumatism. W. C. Voorsanger, San Francisco.

37. **Simple Technic in Herniotomy.**—Witherbee advises leaving the cord alone and sparing the tissues all unnecessary manipulation. He says that it is also unfortunate that in transplanting the cord, it should be allowed to monopolize so large a surface of Poupart's ligament. The latter can be turned to a far better purpose by bringing in contact with it as large an area as possible of the internal oblique. The operator should endeavor in all ways to effect the strongest union between it and the structures opposite. Due precaution should be taken that the sutures do not interrupt the blood suppiy, else sloughing will occur at the expense of approximation. To overcome this Witherbee uses exclusively the figure-of-eight suture, which, he says, if properly inserted, can not be adjusted with sufficient tension to stop the circulation. It has the additional advantage of being removable, and consequently does not overburden the power of absorption. To insure fixation and at the same time to relieve the skin from undue pressure, a U-shaped plate is employed, to the arms of which are attached the sutures after they emerge from the skin. Four silkworm-gut sutures thus introduced will effectually approximate both layers of Poupart's ligament with the ex-

ternal and internal oblique, the transversalis and rectus, if necessary, and will maintain their approximation for an indefinite period, or until firm union has unquestionably taken place.

45.—See abstract in THE JOURNAL, Sept. 2, 1905, page 739.

### Virginia Medical Semi-Monthly, Richmond.

*September 8.*

49 *Quinin in the Treatment of Lobar Pneumonia. E. T. Ramsay, Clark, S. D.
50 Removal of a Grain of Corn from the Right Bronchus. J. Dunn, Richmond.
51 The Menopause. W. L. Peple, Richmond.
52 Ambulant Treatment of Internal Hemorrhoids. C. F. Martin, Philadelphia.
53 Typhoid Fever Limited. A. G. Brown, Jr., Richmond.
54 Constitutional Treatment of Syphilis. M. C. Sycle, Richmond.
55 Principles of Surgery. S. McGuire, Richmond.

49. **Quinin in Pneumonia.**—Ramsey details his experience with quinin in the treatment of lobar pneumonia. When first called to a case of pneumonia, he orders a warm bath, gives a mild cathartic, and, if the pain is at all distressing, he gives a hypodermic of morphin. If the pain returns it can usually be controlled by applying the ice bag. He has discontinued the use of all external applications, as he has not found them satisfactory. He then orders the administration of 30 grains of quinin, repeated in one hour, and again, in some cases, in two hours, depending on the amount of fever and condition of the patient. With the third dose he gives some form of iron, usually reduced iron, in doses of from 3 to 5 grains, repeated every three or four hours. When nervousness is marked, bromids are given, frequently combined with chloral in 10-grain doses. When the rusty sputum is profuse he gives capsules containing 1 grain of acetate of lead, three or four times a day, for two or three days, and while administering the lead he discontinues the iron. He believes that quinin is the most reliable stimulant we have in this disease.

### Journal Medical Society of New Jersey, Newark.

*October.*

56 *Difficulties in Diagnosis of Abdominal Conditions. R. P. Francis, Montclair.
57 Are Curds in Infant Stools Ever Caused by Insufficient Proteids? P. A. Potter, East Orange.
58 Clinical Study of Chorea. A. A. Strasser, Arlington.
59 Mosquito the Only Etiologic Factor in Malaria. J. T. Wyckoff, Leonia.
60 Ambulatory Treatment of Pott's Fracture. E. A. Y. Schellenger, Camden.

56. **Difficulties in Abdominal Diagnosis.**—Francis discusses this question, and as an illustration cites two cases, one which was diagnosed as a case of intestinal adhesions, when there were none, and the other having been diagnosed wrongly a number of times, operation disclosing it to be a case of intestinal adhesions. He concludes that the diagnosis of abdominal conditions depends very largely on the skill and training of the examiner as well as on the physical and other characteristics of the patient. The examination should be systematic and thorough. Inspection, palpation and percussion, with the patient both supine and erect, are the best means of diagnosis. Bimanual examination and particularly examination of the pelvis should never be omitted. A general anesthetic is sometimes, though rarely, needed. It is very important that not only the entire abdomen, but the entire body, should be examined so that the condition of every organ can be noted. Exploratory laparotomy is often warranted in doubtful cases and the decision when to employ it is one of the nicest points in modern surgery.

### Canadian Journal of Medicine and Surgery, Toronto.

*September.*

61 Plea for a Provisional Minister of Health. C. A. Hodgetts.
62 Modified Milk Versus Whey Mixtures. H. T. Machell, Toronto.
63 Reply to Address of Welcome Tendered the Newly-Appointed Medical Supplement of Toronto General Hospital. J. N. E. Brown, Toronto.

### Texas Medical Journal, Austin.

*September.*

64 Evolution of Medicine. M. Duggan, San Antonio.
65 Retiring Address. C. M. Harrison, Cooper.
66 New Pharmacopeia. R. P. Daniel, San Antonio.

### Northwest Medicine, Seattle, Wash.

*September.*

67 Intraocular Malignant Growths. J. A. Mackinnon and J. W. Bailey, Seattle, Wash.
68 Tuberculosis from an Economic Aspect. C. B. Boyle, Bozeman, Mont.

### Montreal Medical Journal.

*September.*

69 Chorionepithelioma. F. A. L. Lockhart.
70 Postdiphtheritic Paralysis. A. T. Mussen.
71 Diplobacillary Conjunctivitis of Morax-Axenfeld. J. W. Stirling and S. H. McKee.

### Journal Missouri State Medical Association, St. Louis.

*September.*

72 Present Status of Orthopedic Surgery. A. J. Steele, St. Louis.
73 Permanent Sequelæ of Influenza. L. W. Dallas, Hunnewell.
74 Newer Methods of Blood Examination for Typhoid, with Demonstration. B. M. Shoemaker, St. Louis.
75 Examination of Blood for Malaria, with Demonstrations. G. C. Crandall, St. Louis.
76 Study of Digitalis. S. A. Johnson, Nevada.

### Northwestern Lancet, Minneapolis.

*September 15.*

77 Technic of Medullary Narcosis. A. W. Morton, San Francisco.
78 Uses and Abuses of Electrotherapeutics. E. G. Gowans. Salt Lake City, Utah.
79 Posterolateral Sclerosis. W. B. Ewing, Salt Lake City.

*October 1.*

80 Pneumonia. H. H. Witherstine, Rochester, Minn.
81 Problems for the Country Doctor in Diseases of the Appendix. J. W. George, Aitkin, Minn.
82 Unwarranted Encroachments of the General Practitioner on the Field of the Eye, Ear, Nose and Throat Specialist, from the Latter's Standpoint. F. Stauffer, Salt Lake City.
83 What the General Practitioner Should Know About the Specialties. L. W. Snow, Salt Lake City.
84 Treatment of Primary and Secondary Syphilis. H. S. Scott, Salt Lake City.

### Wisconsin Medical Journal, Milwaukee.

*September.*

85 Squint. N. M. Black, Milwaukee.
86 Urinary Hyperacidity in Infancy. A. W. Myers, Milwaukee.
87 Aseptic Obstetrics. J. P. Cox, Spooner, Wis.

### Journal South Carolina Medical Association, Charleston.

*September 21.*

88 Foreign Bodies in the Larynx, Trachea and Bronchi. H. R. Black, Spartanburg.
89 Gastrostomy in Stricture of the Esophagus. M. Simons, Charleston.
90 A Plea for State Sanatoria for Tuberculous Patients. J. L. Dawson, Liberty, N. Y.
91 Case of Complete Double Congenital Capsular Cataract. J. W. Jervey, Greenville.
92 Aneurisms of the Groin. A. J. Buist, Charleston.
93 Suppurating Appendicitis. F. L. Potts, Spartanburg.
94 Gangrenous Stomatitis. W. A. Smith, Glendale.
95 Enterocolitis or Summer Diarrhea of Children. J. L. Jeffries, Spartanburg, S. C.

### Fort Wayne Medical Journal-Magazine.

*September.*

96 Diagnosis and Treatment of Ruptured Ectopic Gestation. B. Van Sweringen, Ft. Wayne.

### Iowa Medical Journal, Des Moines.

*September 15.*

97 Eclampsia Gravidarum. F. J. Smith, Des Moines.
98 President's Address. A. Babcock, New Hampton.
99 Insects, the Rôle they Play in the Transmission of Diseases. H. Albert, Iowa City.

### Medical Fortnightly, St. Louis.

*September 25.*

100 Solving Problems in Diseases of Children. W. Wormley, Philadelphia.
101 Permanent Catheterization in Non-Surgical Cases, with Case of Histories, and Description of Apparatus for Retaining Catheter in Place. C. A. Boice, Washington, Iowa.

### The Ophthalmic Record, Chicago.

*September.*

102 Muscle Testing in Refraction. F. H. Koyle, Hornellsville, N. Y.
103 Three Unusual Clinical Observations: Change in Astigmatism Produced by Chalazion; Contact Keratitis After Cataract Extraction; Inherited and Acquired Syphilis in the Same Subject. H. D. Bruns, New Orleans.
104 Tine of a Steel Fork Thrust Through the Left Upper Eyelid, Eyeball and Through the Antrum of Highmore. G. F. Keiper, Chicago.
105 Case of Pseudo-Pterygium and Symblepharon, Relieved by the Use of Thiersch Grafts. W. R. Murray, Minneapolis.
106 Primary Epithelioma of Cornea. G. T. Brady, San Francisco, Cal.
107 Comparative Anatomy of the Eye. J. Law, New York.
108 Indirect Injury of the Eyeball. Eberhardt, Michigan City, Ind.
109 Mesencephalic Paradoxes. B. G. Wilder, Ithaca, N. Y.

### Detroit Medical Journal.

*September.*

110 Recipients of the Nobel Prize in Physiology and Medicine. Major Donald Ross, F. W. Mann, Detroit.
111 Niels R. Finsen. H. R. Varney, Detroit.
112 Ivan Petrovitch Pawlow (Pavloff). H. E. Safford, Detroit.
113 Leucocytosis in Purulent Affections. J. Sill, Detroit.
114 Duty of the State in the Care of Crippled and Deformed Children. H. W. Orr, Lincoln, Neb.

### Journal of Medicine and Science, Portland, Maine.

*September.*

115 Sanctimonious Advertising. P. J. Noyes, Lancaster, N. H.

### Southern California Practitioner, Los Angeles, Cal.

*September.*

116 Case of Acromegaly. J. C. King, Banning, Cal.
117 Diagnosis of Surgical Lesions of the Kidney. C. D. Lockwood, Pasadena.
118 Different Albumins of the Urine, Their Detection and Their Clinical Significance. D. Fulton, Los Angeles.
119 Diseases of the Tropics—Their Effect on Commerce. P. Manson, London, England.
120 Newfoundland—Climate and Physical Geography. C. M. Skinner, Brooklyn, New York.
121 Actual Care of the Sick in Hospitals and Care of the Sick in Their Homes. W. Lindley, Los Angeles.
122 Diseases of Women and Children. W. A. Edwards, Los Angeles.
123 Attitude of the Medical Profession Toward the Social Evil. H. A. Kelly, Baltimore.

### Journal of New Mexico Medical Association, Albuquerque, N. M.

*September 15.*

124 Hemorrhagic Typhoid—Typhoid Parotitis—Recovery. B. D. Black, Las Vegas.
125 Gastroenteric Intoxication in the New-Born. J. R. Gilbert, New Mexico.
126 Treatment of Peritonitis—Diffuse and General. G. C. Bryan, Alamogordo, N. M.

### Journal Kansas Medical Society, Lawrence, Kan.

*September.*

127 Surgical Disease of the Gall Bladder. G. C. Purdue, Wichita.
128 The Country Practitioner as a Surgeon. B. R. Riley, Coyville.
129 Therapeutic Action of Chemic Salts. B. D. Eastman, Topeka.

### Medical Herald, St. Joseph, Mo.

*September.*

130 Infection of the Ovaries and Tubes and Natural Resistance to Invasion. J. R. Brady, Sioux City, Iowa.
131 Auto-Serotherapy. G. S. Browning, Sioux City, Iowa.
132 Pharyngeal Tonsil as a Causative Factor in Systemic Disturbances. W. J. Bussey, Sioux City, Iowa.
133 Eye Symptoms in Medical Diagnosis. F. E. Franchere, Sioux City, Iowa.
134 Catarrhal Deafness; Its Prevention. F. Roost, New York.
135 Cerebro Psychic Rest, and Rest Through Cerebro Psychic Diversion in the Cure of Insanity and Insanoid States. C. H. Hughes, St. Louis, Mo.
136 Case of Choroiditis Due Probably to Necrosing Ethmoiditis. W. W. Bulette, Pueblo, Colo.

### American Journal of Urology, New York.

*September.*

137 Present-day Status of Tuberculosis of the Male Genital Organs. E. R. W. Frank, Berlin.
138 Injuries of the Ureters During Gynecologic Operations. C. G. Cumston, Boston.
139 The Technic of Genitourinary Examination. G. L. Eaton, Cal.

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## FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal.

*October 7.*

1 Combined Aortic and Mitral Disease in Rheumatic Children. F. J. Poynton.
2 Strain as a Factor in Cardio-Aortic Lesions. H. B. Anderson.
3 *An Inquiry into the Cause of Angina Pectoris. J. Mackenzie.
4 *Case of Syncopal Bradycardia Showing the Independent Action of the Two Sides of the Heart. J. S. Maynard.
5 *Albuminuria of Adolescents. C. Dukes.
6 Case of Ligature of the Profunda Femoris Artery, Common Femoral Artery and Common Iliac Artery on the Same Side, with Perfect Recovery. H. E. Clark.
7 Innominate Aneurism; Simultaneous Ligature of Right Carotid and Subclavian Arteries; Recovery. H. N. Dunn.
8 Stages of Pulmonary Tuberculosis. T. Campbell.
8½ *Sixty-seven Cases of Congenital Cleft Palate Treated by Operation. J. Berry.
9 Gastro-Duodenostomy as a Substitute for Gastro-Jejunostomy. S. White.
10 Appendicostomy. C. B. Keetley.
11 Note on a Specimen of Bladder and Urethra Removed Two Years After Suprapubic Prostatectomy. J. W. T. Walker.
12 Talma-Morison Operation. Report of a Successful Case. de W. I. C. Wheeler.
13 Ligature of the Innominate Artery. W. Sheen.
14 Total Enucleation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. Freyer.

3. **Cause of Angina Pectoris.**—For many years Mackenzie has noted carefully the individual symptoms present in case of angina pectoris in order to find some cause for these symptoms, as well as the mechanism by which they are produced. In view of the fact that angina pectoris occurs in lesions of great diversity, Mackenzie believes that some condition common to all must be the cause of the symptoms. The fact that angina pectoris appears only after the heart muscle has been long exposed to excessive strain points to the cause being situated in the muscle. All the functions of the muscle fibers save that of contractility can be shown to be intact in many patients who suffer from angina pectoris. The alternating action of the heart is a demonstrable sign of exhausted contractility, and its presence is always associated with symptoms that are included in the symptom-complex of angina pectoris. The same exciting cause—extra strain on the heart—may provoke both the angina pectoris and the alternating action and both may disappear with the removal of the cause. The inference to be drawn from the consideration of these facts is that the symptoms that are included in the term "angina pectoris" are so closely associated with an impairment of the function of contractility of the muscle fibers of the heart that in all probability angina pectoris will be found to be an evidence of the impairment of the function of contractility.

4. **Syncopal Bradycardia.**—The chief point of interest in Maynard's case appears to be the undoubted evidence afforded of an independent action of the two sides of the heart. The descending or diastolic position of the sphygmograph curve showed no evidence of subsidiary pulsations communicated by the heart, and yet the ear and the hand detected secondary impulses which could not have failed to have been registered by the sphygmograph had these originated in the left heart. Hence Maynard concluded that the sounds and impulses referred to were produced in the right side of the heart during the diastolic pause of the left ventricle. The patient was treated with various drugs, including strychnin, with and without strophanthus, and mercury perchlorid; strychnin, on the whole, appeared to be most beneficial. The accelerated influence on the heart's action of either stimulants or exertion was very slight.

5. **Albuminuria of Adolescents.**—The form of albuminuria considered by Dukes is that usually referred to as early, latent, functional, cyclic, and intermittent albuminuria and which occurs usually among boys and girls at school. Dukes says that boys exhibiting the signs of the malady are sometimes sent from school on the ground that they are unsuited for the rough and tumble of school life. They are also excluded from all public appointments in the navy, army, and civil service at home and abroad. Life insurance is deferred or refused to these applicants, except at prohibitive rates. Dukes found that the larger class of patients exhibiting this symptom also exhibit increased arterial tension in consequence of irritability of the vasomotor nerves. This tension is very unstable and is most frequently produced by excess of nitrogenous food, by imperfect elimination, and by hereditary tendency to gout. A dose of blue pill and alkalids works wonders. The next most extensive class comprises those who have deficient vasomotor control. The treatment of this class resolves itself into abundance of food and tonics. The remainder are the spare, highly strung, oversensitive neurotics. The bromids, judiciously administered with occasional doses of blue pill, afford alleviation to patients of this type, but the only efficient remedy is the removal of anxiety so that intellectual work may be undisturbed by the intrusion of depressing feeling. Dukes says that when the albuminuria of adolescents is recognized and treated there is little likelihood of its proving the precursor of organic disease of the kidneys, even when its duration has been many years.

8½. **Operative Treatment of Congenital Cleft Palate.**—Results obtained in 67 cases of operation for congenital cleft palate are carefully tabulated by Berry. He never operates during the first 22 months of life, believing that some time during the third year of life, in the vast majority of cases, is the time when the operation can be done with most advantage to the patient. In some few cases of delicate children and ill-nourished children in whom the soft tissues covering the palate bones are thin, it may be advisable to postpone the operation to a somewhat later date, but the cases in which operation should be done after 4 years of age are extremely rare, says Berry. He has never declined to operate in any case under the age of 20, nor has he ever advised treatment by mechanical apparatus rather than by operation in any patient under that age. The operation performed by Berry has been on the lines of that originally introduced by Langenbeck and Ferguson. Briefly the operation consists of dissecting up a broad band of soft tissues from the hard palate on either side of the cleft, in detaching the soft palate completely from the posterior mar-

gins of the horizontal plates of the palate bones, and then, after these soft tissues have thus been brought down, in sliding them toward the middle line. Their inner edges are then united by sutures, either before or after lateral incisions have been made through the anterior part of the soft palate and posterior part of the mucoperiosteum of the hard palate. By these means even the widest cleft in the hard palate can be closed, although more than one operation may be necessary. Two points are essential for success. One is that the soft palate shall be completely detached from the posterior edges of the palate bones. If this is not done (even in most cases of cleft limited to the soft palate) the soft tissues in bad cases can not be brought down enough to enable the edges to meet in the middle line. The other point which demands consideration is the position and extent of the lateral incisions that must be made to relieve tension and temporarily to paralyze part of the soft palate. In ordinary cases in which the cleft is not very wide these incisions should be made after the palate has been sewn up. In cases of very wide cleft they must be made before the edges can be approximated. In his earlier operations Berry used to make these incisions too near the middle line from fear of wounding the posterior palatine artery, and too far forward from fear of encroaching too much on the soft palate, and thus endangering the vitality of the flap. He pays very little attention to the palatine artery. He cuts close to the teeth, and often right across the artery near its exit from the palatine foramen. The lateral incision should extend as far backward as the middle of the soft palate at its junction with the lateral wall of the pharynx.

## The Lancet, London.

*October 7.*

15 An Address. R. B. Carter.
16 Address on Efficiency. J. C. Browne.
17 Method in Medicine. R. A. Young.
18 *Ethyl Chlorid as a General Anesthetic. W. J. McCardie.
19 *Case of Motor Aphasia Without Agraphia. B. Branwell.
20 *Observations on the Thymus Gland in Children. J. M. F. Brickdale.
21 Case of Pneumonia with Affection of the Cranial Nerves; Recovery. J. F. H. Dallys.
22 Method for the Detection of Flaws in Nominally Air-tight Sealed Glass Vessels. E. Maynard.
23 Series of Cases of Lead Poisoning Due to Hard Water. J. C. Thresh.
24 Case of Large Chylous Abdominal Cyst; Operation; Recovery. E. B. Fuller.
25 Chronic Paralysis of the Intercostal Muscles as a Primary Cause of dropsy. G. W. Howland.

18. **Ethyl Chlorid as a General Anesthetic.**—McCardie believes that ethyl chlorid occupies a position as an anesthetic about midway between nitrous oxid and ether. It is, as one would expect from its composition, more toxic than the former, and when used in properly selected cases nearly as safe as the latter. Nitrous oxid as regards safety is still in a class by itself. We should use ethyl chlorid rather to replace chloroform and ether in certain cases than to administer it as a substitute for nitrous oxid. For short operations needing longer and deeper anesthesia and greater muscular relaxation than nitrous oxid or nitrous oxid mixed with oxygen affords, ethyl chlorid is of great advantage. As a preliminary to etherization this anesthetic is unequaled. The contraindications to ethyl chlorid are connected with the upper air passages and particularly with inflammation or narrowing in or about the larynx—e. g., swelling or edema thereabouts. Patients suffering from goiter take it well unless there be marked dyspnea or stridor. McCardie is convinced that ethyl chlorid also is very useful in military surgery, owing to its portability and rapidity of action. In certain procedures, such as tying blood vessels and small amputations, it is necessary to operate on the spot before the patient can be safely transported to a base hospital. The saving of five or six minutes in the induction and of ten minutes in the recovery from narcosis in such conditions is most important, especially as the number of surgeons is always out of proportion to the number needed in a serious engagement. Time, too, could be saved by administering ethyl chlorid before chloroform. Again, in soldiers enfeebled by campaigning and suffering from great loss of blood, shock would be far less intensified by ethyl chlorid than by chloroform. After ethyl chlorid narcosis, patients are at once safely transportable.

19. **Motor Aphasia Without Agraphia.**—The great point of interest in Branwell's case is the fact that there was complete motor aphasia without any agraphia; any defect in writing which was present in the early stages of the case was clearly a mere defect of manipulation, a defect due to inability to hold the pencil and not an aphasic defect properly so-called. The aphasia was purely motor. Branwell is convinced that a sudden organic brain lesion, probably either embolism or hemorrhage, was the cause of the symptom.

20. **Thymus Gland in Children.**—Brickdale summarizes his article as follows: 1. The usual weight of a microscopically normal thymus in a child under 1 year is under 100 grains. 2. Children suffering from "primary atrophy" or marasmus commonly, but not always, exhibit fibrotic changes in the thymus; the weight and size of the organ are also usually diminished. 3. Children suffering from "secondary atrophy" exhibit similar changes, but they are not so constant. 4. Possibly some other factor than mere malnutrition or starvation may produce these fibrotic changes, as a case in which pure starvation was produced by congenital stenosis in the alimentary tract they were not observed. 5. In cases of acute illness in children, fibrosis of the thymus may accompany general wasting. It is difficult in these cases to exclude previous disturbances of nutrition, at any rate among hospital patients. 6. Enlargement of the thymus and other lymphatic structures in the body may occur as the result of acute toxic absorption (as in diphtheria) or a more chronic condition (as in lymphatism). In these enlarged thymus glands eosinophile cells are numerous, but no special types are peculiar to either class. 7. In some conditions, especially in tuberculosis, cells with basophile or neutrophile granules seem to replace the eosinophiles. 8. In congenital heart disease eosinophiles are not found in the thymus. 9. True hyaline degeneration very occasionally occurs in Hassal's corpuscles. 10. Fatty degeneration of the cells is common and appears often to affect the peripheral zone of the lobules.

## Presse Médicale, Paris.

26 (No. 74, September 16.) Du choléra en Allemagne (in Germany). Dunbar.
27 Radioscopie gastrique. Technique spéciale et applications cliniques. G. Leven and G. Barret.
28 Esophagoscopie dans le traitement des corps étrangers de l'esophagoscope. L. Sencert.
29 (No. 75.) *Les grosses rates en pédiatrie (enlarged spleens). G. Carrière.
30 *De la fièvre hystérique (fever). G. N. Caramano.
31 (No. 76.) Technique de l' appendicectomie. A. Gosset.
32 L'albumine dans les régimes alimentaires. M. H. Labbé.
33 (No. 77.) La lutte contre la tuberculose. Le sanatorium familial de Montigny-en-Ostrevent. M. Letulle.
34 (No. 78.) Passage du Spirochete pallida dans le liquide de vesicatoire (into blister). C. Levaditi and G. Z. Petresco.

29. **Enlarged Spleen in Pediatrics.**—Carrière discusses the various conditions liable to entail enlargement of the spleen in infants and differentiates a case under observation as splenomegaly with pseudoleukemic anemia in a rachitic child, aged 20 months. The possibility of a syphilitic origin for the condition imposes the necessity for specific treatment supplemented by nourishing food and tonics.

30. **Hysteric Fever.**—Caramano has had occasion to observe several cases of hysteric fever. He mentions that it is characterized by its sudden onset, without headache or chill, by its periodicity, and by the good general condition afterward, the patient being ready to eat at once. It usually comes on about 5 or 6 p. m. and subsides three or four hours later. The thermometer may go up very high and the pulse may become accelerated. He has noticed a pulse rate of from 130 to 140, with a temperature of from 39.5 to 41 C. (103 to 105.8 F.) The hysteric nature of the fever can be determined only after exclusion of all other causes. It sometimes follows a cold or sore throat, but is generally the result of autosuggestion. Hanot's patient was convinced she would have typhoid fever because she had attended two cases of typhoid, and Vaillart's thought she would have malarial fever because she had been visiting in Corsica. Treatment of hysteric fever should not be with drugs. Suggestion alone will conquer it. In 2 cases Caramano followed Widal's advice and gave his patients what he told them was a very active medicine and that it would be dangerous for them to take more than the two tablespoonfuls he ordered. If the drug acted properly the urine would turn

blue. The medicine was only a weak solution of methylene blue, with a few drops of nux vomica to give it a taste. Both patients were permanently cured in less than two days.

34. **Passage of Spirochetes into Serum of Blisters.**—Levaditi and Petresco relate a number of experiments and experiences which demonstrated that the *Spirochæta pallida* passed into the blisters made artificially on secondary syphilitic lesions on the skin, and also into blisters produced on sound skin in the vicinity of secondary syphilitic cutaneous lesions. Control experiments on non-syphilitic subjects invariably resulted negatively. The spirochetes were found in the blister over a secondary syphilitic lesion even when the skin was intact, but the findings were negative when the lesions were those of recent infection or were tertiary manifestations. The discovery of the spirochetes in an artificial blister may have important diagnostic significance in puzzling cases of syphilis.

### Revue de Médecine, Paris.

*Last indexed XLIV, page 140.*

35 (XXV, No. 2.) Ration alimentaire dans quelques cas de tuberculose humaine. C. Richet.
36 Le bégaiement épileptique (stuttering). C. Féré. Three cases.
37 Sur l'hyposthénie cardio-vasculaire climactérique. J. Pawinski.
38 *Opothérapie rénale (Méthode Renaut-Dubois). Ingestion de macération de rognons crus de porc. Résultat cliniques. F. Chaupin. (Commenced in No. 1.)
39 Maltosurie dans un cas de traumatisme cranien. R. Lépine and Boulud.
40 (No. 3.) Contribution à l'histoire de la neurasthénie sexuelle. C. Féré. Two cases.
41 La fièvre menstruelle des phthisiques. C. Sabourin.
42 L'hypophyse et la pathogénie de la maladie de Basedow. A. Salmon.
43 De la glycogénie dans le diabète consomptif. R. Lépine.
44 Cas de diabète aglycémique. Id.
45 (No. 4.) Classification et valeur pathogénique des albuminuries orthostatiques. J. Teissier.
46 Le métabolisme de l'eau et des chlorures (of water and of chlorids). H. Labbé and E. Morcholsne.
47 Auréoles névropathiques. C. Féré.
48 De l'oligurie habituelle physiologique. J. Cottet.
49 (No. 5.) Raideur juvénile (rigidity). Nageotte-Wilbouchévitch.
50 Fungoid Mycosis with Multiple Deep Ulcerations Treated and Cured with the Soluble Toxin of the Erysipelas Streptococcus.—Mycosis fongoide, etc. Martin-Roux.
51 *De l'apoplexie traumatique tardive (son importance au point de vue médicolégal). P. Marie and O. Crouzon.
52 Origine du pigment dans le diabète bronzé, et pathogenie de cette affection. L. Margain.

38. **Organ Treatment of Nephritis.**—THE JOURNAL has chronicled Renaut's successful treatment of nephritis with a maceration of pig's kidneys. The technic was described on page 341 of volume xlii, 1904. Chaupin here relates in full detail his latest experiences with it in selected cases. The dose recommended for adults is two kidneys a day for ten days out of fifteen. The kidneys should be from young pigs and should not weigh more than 160 gm., selecting the lighter colored ones. The maceration has a very energetic diuretic action and also an unmistakable antitoxic property. The latter is demonstrated by the rapid subsidence of the symptoms, suggesting a general disintoxication, the edema and congestions vanishing, the arterial hypertension subsiding, and the enlarged heart becoming smaller. In some cases this effect occurs promptly, in others not for a long time. In one case this treatment was kept up for eleven months without improvement, after which amazing benefit was realized. The maceration sometimes has a laxative effect or may cause sweating. The albuminuria usually subsides, and sometimes there is increased excretion of urea and chlorids, with a higher "coefficient of oxidation." The general health invariably showed marked improvement. Other writers have reported 23 cases of severe nephritis benefited likewise by this organ therapy. Renaut does not regard it as a specific, but merely as an extremely valuable adjuvant to the usual measures.

51. **Tardy Traumatic Apoplexy.**—Marie and Crouzon describe a case of apoplexy with hemiplegia and aphasia developing in a man of 50, six days after he had been thrown from the top of a cab. Discussing this and similar cases on record, they conclude that tardy traumatic apoplexy is due to some lesion of the brain, generally hemorrhagic, produced by the accident in a predisposed subject. The influence of the predisposition, of arteriosclerosis in particular, can be readily traced in the traumatic cerebral processes, even when they assume the form of a neurosis. Whatever the predisposition, the rôle of the traumatism is no less capital. The physician confronted with these tardy traumatic nervous affections should seek for an organic cause and should study whether the traumatism alone is responsible or whether there may not be some underlying predisposition.

### Semaine Médicale, Paris.

53 (XXV, No. 39.) A propos de la mortalité comparée des nourrissons dans les principaux pays d'Europe (infantile death rate).

### Archiv f. Verdauungs-Krankheiten, Berlin.

*Last indexed page 1122.*

54 (XI, No. 4.) *Insufficient Nourishment of Dyspeptic and Nervous Persons.—Die ungenügende Ernährung bei Dyspeptikern und Nervösen. A. Mathieu and J. C. Roux (Paris).
55 *Determination of Remains of Albumin in Food by Means of Theosinamin.—Ueber die Bestimmung der in den Fäces vorhandenen Nahrungseiweiss-Reste mittels Thiosinamins. E. Rosenberg.
56 *Ueber eine schwere Form von chronischem Colon-Spasmus. R. E. Schütz..
57 Ein bemerkenswerter Fall von Magen-Tetanie (gastric). H. Edenhuizen.
58 *Milchdiät bei chronischer Tropen-Diarrhoe (milk diet). F. Vogelius.
59 *Die Palpation der Flexura sigmoidea. F. Schilling.
60 Single and Specific Nature of Pancreas Trypsin.—Beitrag zur Frage der einheitlichen und spezifischen Natur des Pankreastrypsins. L. Pollak. Id. M. Ehenreich.

54. **Lack of Sufficient Nourishment in Dyspeptic and Nervous Persons.**—Mathieu and Roux emphasize the fact that the relative inanition in cases of dyspepsia and neurasthenia is liable to entail serious consequences, aggravating the primary ill and leading to others. The most important points for the diagnosis are the behavior of the liver, tongue and stomach, the perversion of hunger, and the mental condition. Loss of weight is an indication of relative inanition. The loss of fat in the abdomen is liable to cause the liver to slide down and forward, and it may become reduced in size to 4, 5 or 6 cm. When such a small liver is encountered, in the absence of cirrhosis, it is a sign that the patient has been inadequately nourished for a long time, and this assumption is corroborated by the increase in the size of the liver when the patients are better fed. The liver diminishes in size from loss of fat and of glycogen and possibly also from the lesser volume of the blood in circulation. Whether the lesser size of the liver is actual or is merely an apparent reduction from the falling forward of the liver, the symptom is very important for the diagnosis of relative inanition and allows its degree to be determined. The vanishing or perversion of the sense of hunger is another important sign. The perversion of hunger in nervous young women is sometimes shown by a feeling of nausea in the morning before arising and again about 4 or 5 in the afternoon. If they eat a little, the tendency to nausea vanishes. If this perversion of the sense of hunger is supposed to be the result of dyspepsia, and the food is still further reduced, the patients grow still weaker; plenty of nourishing food is the natural remedy, and it should be insisted on with decision and perseverance. This hunger with nausea resembles what Benda has called "hunger with fainting." His patients experienced at certain hours a feeling of faintness with great depression and sometimes nausea, cyanosis and cold sweats. Hunger with periodically recurring conditions of anguish is another variety. In these nervous conditions the appetite is satisfied with a few mouthfuls, and if more is eaten there is uncomfortable satiety. This is especially liable to occur in hysteric young women, and it requires great powers of persuasion and perseverance to overcome their resistance to take more food when they feel satiated with the first mouthful. The tongue of persons debilitated from relative inanition is generally white and dirty and there is splashing in the stomach. The digestive apparatus loses its fat and shrinks in size and the muscularis of the stomach becomes thin. The organ stretches with the smallest amount of food ingested, and five or six hours elapse before even a small meal is passed along out of the stomach. A splashing sound can easily be elicited in the morning, fasting, after drinking 50 or 100 gm. of water. Succussion will also reveal a floating sound near the umbilicus or even several centimeters below. The extreme dilatation of the stomach is apt to alarm the physician and to cause him to reduce the nourishment still more, but this is a grave error which merely aggravates and perpetuates the morbid condition.

Nourishing feeding will restore conditions to normal if persevered in, if the patient stays in bed or lies down most of the time. In the course of three or four months the stomach will be found to have returned to its normal dimensions. In one instructive case cited the patient gained 35 pounds and all disturbances ceased after institution of a suitable nourishing diet. This relative inanition is liable to entail simple neurasthenia, hysteria or fixed ideas. The prognosis is most favorable in the neurasthenic cases. The patients must be encouraged that all will soon come out all right, but that for two or three weeks after resuming abundant nourishment they are liable to have a number of more or less violent digestive disturbances. Such patients usually co-operate with the physician, but this is seldom the case in hysteric perversion of the appetite. Hysterical individuals are incapable of making an effort. The anorexia becomes a fixed idea, and psychic measures are necessary. The prognosis is much more unfavorable in the cases of hereditary degeneration with fixed ideas and phobias.

55. **Thiosinamin Test of Remains of Albumin in Feces.**—Rosenberg has been testing Oefele's thiosinamin test, but has found it unreliable. Thiosinamin, he says, dissolves coagulated egg albumin, but not the albumin in muscle and connective tissue.

56. **Chronic Spasm of Colon.**—Schütz reports 3 cases of chronic spasm of the colon. The patients were young women, two of them virgins. The assumption of appendicitis in one case led to an unnecessary operation. The contraction of the colon could be readily palpated, but it was dubious whether this was an idiopathic, purely nervous affection or the result of some lesion elsewhere. The spastic colon was movable and thinner than usual. The attacks were treated like lead colic. Purgatives merely added to the disturbances, and even oil enemata aggravated the condition. Opium and a liquid diet were the only means that brought relief. After the attack had commenced to subside, the tendency to contraction was combated with rest, hot applications, warm prolonged baths, belladonna, arsenic and regulation of the diet. All irritating foods, coarse bread and vegetables, had to be avoided. Massage is contraindicated, but slight vibration massage proved so beneficial in some cases that it should always be given a trial. Galvanization also demonstrated a favorable influence on the contraction. In one case the trouble was evidently a primary neurosis. In another there were symptoms of irritation in various nerve regions. The trouble is evidently the result of abnormal irritability of the nerves of the intestine in persons with a tendency to anemia and neuropathy. In two cases the trouble dated from the fourteenth and seventeenth year. In the first the attacks lasted from eight to twelve weeks and at last for six months, but they occurred only four times in five years. In the other patient they occurred frequently, but lasted only a few days, frequently coming on with the menses. Constipation was the rule among the patients. The pains are like cramps in the sides and across the abdomen, at first occurring only at stool, but gradually increasing in duration, with agonizing exacerbations. The bowels do not move at all, and there may be loss of appetite with nausea and broken sleep. The normal temperature, pulse and respiration exclude the idea of peritonitis. There is no sensitive region to be found in the abdomen outside of the contracted colon.

58. **Milk Diet in Tropical Diarrhea.**—Vogelius advocates an abundant and strict milk diet as offering the best chances for recovery in cases of tropical diarrhea. In a case described at length he commenced with 2.5 liters in twenty-four hours, gradually increasing to 3 or 4 liters and keeping up this exclusive milk diet for four or five weeks after the stools had become formed.

59. **Palpation of Sigmoid Flexure.**—Schilling gives minute directions for palpating the region of the flexure to obtain the maximum of information. He also cites a number of cases showing the results of this careful investigation, which afforded information of the greatest moment for the treatment.

## Berliner klinische Wochenschrift.

61 (XLII, No. 35, Aug. 28.) Isolierte Lähmung des rechten Nerv. musculocutaneus nach Tripper (post-gonorrheal paralysis). M. Bernhardt.

62 *Fall von Thyreoaplasie (congenitalem Myxödem) und über den abnormen Tiefstand des Nabels bei diesem Bildungsdefekt. P. Argutinsky.
63 Ueber das Verhalten des Lecithins zu den Fermenten. P. Mayer.
64 Das elastische Gewebe der Magenwand und die Beziehung desselben zur Pathologie des Magens (elastic tissue in stomach walls). T. Mironescu.
65 *Fall von spontaner Luxation des Bulbus. H. Levin.
66 Beitrag zur Lehre vom Meckel'schen Divertikel. M. Zondek.
67 *Einige neue Gesichtspunkte über Herzneurosen und die Superposition von Erweiterungen auf sie (cardiac neuroses and enlargement). P. C. Franze.
68 *Ueber die hämorrhagische Form der Leber Cirrhose. L. v. Aldor.
69 *Die diagnostische Hoden Punktion (of testicle). C. Posner.
70 *Die acuten Darmerkrankungen des Säuglings (infantile intestinal affections). B. Salge.

62. **Congenital Myxedema.**—Argutinsky gives illustrations of a child with thyreoaplasia inducing congenital myxedema, showing the great benefit derived from fifteen months' thyroid treatment. He calls attention to the remarkable lowness of the umbilicus in the child before treatment and the gradual rise of the umbilicus to its normal position as treatment progressed. He has found a dozen other cases illustrated in the literature, the pictures showing the umbilicus remarkably low on the abdomen. When thyroid treatment is not instituted, the children grow up with this anomaly, but in the illustrations of children thriving under thyroid treatment the umbilicus seems to have risen to its normal location.

65. **Spontaneous Luxation of the Eyeball.**—Levin's patient is a corpulent man with a tendency to exophthalmos since youth, noticeable also in other members of the family. One night he was awakened by a violent pain in his eye and he found that the eyeball protruded entirely from its socket. It was entirely outside of the lids, and he pushed it back into place with his fingers. This spontaneous luxation of the eyeball recurred repeatedly, affecting sometimes one eye and then the other. One of the eyeballs is liable to drop out in this way if he bends his head over far to one side, the spasmodic contraction of the lids behind the eyeball keeping it from spontaneous reposition. The vision is not affected by these spontaneous luxations, which are probably the result of vascular congestion in the veins of the orbit. Treatment was directed to relieving the tendency to congestions and varices and to controlling the eyes by keeping them bandaged at night. The patient found the bandaging so annoying that tarsorrhaphy is under consideration to make the palpebral fissure too small to allow protrusion of the eyeball.

67. **Cardiac Neuroses and Superposed Dilatation.**—Franze has observed a few cases of dilatation of the heart on both sides due to a neurosis of the heart or blood vessels or both. The patients were generally young or middle-aged and had complained of neurasthenic symptoms for some time previously, to which were finally added symptoms of a neurosis of heart or vessels or both, and the latter in time entailed unmistakable enlargement of the heart on both sides. The heart action suffered in consequence, but it could be modified by medication. The dilatation aggravated the other troubles and was important both for therapeutics and prognosis. He cites the particulars of a few cases and discusses the modus operandi of the dilatation. The sympathetic system is usually responsible for these neuroses of the heart, and this explains the curative action of electricity correctly applied in such cases. When the systole is feeble for a certain length of time, the inevitable result will be dilatation of the ventricles. Rehfisch and Colbeck have already suggested that nervous heart disturbances might entail organic changes. Prolonged decrease in the energy of the contractions of the heart must entail dilatation of the ventricles from the pressure of the accumulating blood within. The heart responds to stimuli differently from other muscles. Either it does not respond at all or it exerts its maximal energy. The smallest excitation produces the maximal functional response. Franze adds that the dilatation resulting from pathologic reflex or other excitation yields to appropriate dietetic and physical measures, especially to an individualized electrotherapy with the alternating current or "four-cell baths" in combination with carbonated thermal saline baths. In case of neuroses of the heart or vessels inquiry should be made for local foci in the abdomen or pelvis, especially in the urogenital tract in men and in the uterus or

adnexa in women. If a focus can be discovered, then the neurosis may be accepted as a reflex phenomenon by intermediation of the sympathetic. Also in all cases of general neurasthenia with nervous cardiac disturbances, the participation of the great sympathetic plexuses and ganglia should be suspected as the source of the pathologic irritation.

68. **Hemorrhagic Form of Cirrhosis of Liver.**—Aldor relates the history of 4 cases, some under observation for four years. His experience suggests that this affection is possibly identical with the syndrome known as Banti's disease. The special features of his cases were the absence of ascites and of meteorism, as well as of digestive disturbances and the recurrence of hemorrhages. In 2 cases they occurred as hematemesis, in 1 as enterorrhagia and in another as epistaxis. In some of the cases the spleen was not much enlarged and an extensive collateral circulation between the portal vein and the vena cava was surmised. In other cases the spleen was very large. Aldor is inclined to regard the hemorrhages as a kind of compensatory process. The resulting anemia was very protracted, but the patients recovered their previous strength after each hemorrhage with surprising promptness.

69. **Puncture of Testicle in Diagnosis of Azoospermia.**—Posner believes that the production of spermatozoa continues unchecked, although the passages for their outward flow may have been obstructed for years. It is extremely probable that under normal conditions a certain proportion of the spermatozoa die in the testicles and are absorbed, possibly supplying some element to the organism needed in the general metabolism. The question whether the testicles are still functioning normally is, therefor, of great importance, as operative intervention, opening a passageway for the spermatozoa to escape, will cure many a case of apparent irremediable azoospermia. To determine this question, Posner punctures the testicle with a Pravaz needle. It is a very simple and harmless procedure, without the slightest inconveniences. If the findings are negative he punctures again, as negative findings are sometimes encountered in healthy persons. He aspirates only enough fluid to spread on a glass for microscopic examination. It is difficult to obtain more than this, except in case of hydrocele or cystic enlargement of the tubuli seminiferi. The May-Grünwald stain shows up the spermatozoa well, but is not absolutely necessary. Posner has thus punctured the testicle in 17 cases, and among 12 patients who had epididymitis from seven to twelve years previously spermatozoa were found in all but 2, while, with a single exception, none were found in the 5 patients whose epididymitis dated from twelve to twenty-six years before. The exception was a man who had living spermatozoa, although the ducts had been obstructed by epididymitis seventeen years previously. The spermatozoa were found in lively motion in one case, contrary to the general assumption that they do not become lively until they feel the effect of the prostatic fluid. Posner's previous communication on the value of surgical treatment to remove the obstacle causing apparent azoospermia was published in the *Deutsche med. Wochft.* last year, and was summarized in THE JOURNAL, page 638 of volume xliii.

70. **Treatment of Intestinal Affections in Infants.**—Salge merely reviews the present status of treatment of intestinal affections. In those due to too much food at a time and too short intervals between, without organic changes, he states that all food should be stopped and only as much weak, black tea given as corresponds to the amounts of the preceding feedings. If this starving for twenty-four hours is not enough, calomel can be given in doses of from .02 to .05 gm. every two hours until three doses have been taken. It is best to substitute some other food for the milk for a time afterward. When the stools become less fluid and generally dark-brown in color, after three days of flour feeding, milk can be resumed. If a tendency to vomiting and loss of appetite persists, the motor function of the stomach should be examined. This can be done by siphoning out the stomach three hours after a meal to find whether it is empty or contains free hydrochloric acid. If not empty, the stomach should be rinsed, which is a simple matter in an infant. A 1 per cent. solution of Carlsbad salts is admirable for the purpose. The appetite sometimes returns surprisingly after lavage of the stomach, and he sometimes uses it for this indication alone. When the anorexia is persistent, pepsin or hydrochloric acid or bitters might be tried or a mixture of 1 part tincture of strychnin and 2 parts of fluid extract of condurango in 10 parts of tincture of wine of rhubarb. Five drops of this mixture are given three times a day, fifteen minutes before the meal. When the dyspeptic disturbances are severe, the symptoms of intestinal catarrh suggest a serious intoxication of the system. Here the main indication is to sustain the heart. If the tendency to collapse can be controlled, the children recover in apparently desperate cases. Large doses of camphor are required, from .1 to .2 gm. at first and then from .05 to .1 gm. every two hours. All food should be suspended and only enough tea given to moisten the mouth. The loss of water is compensated by subcutaneous saline infusions twice a day, injecting from 120 to 150 c.c. of a .9 per cent. salt solution, or, better still, a solution of .5 salt and .5 sodium bicarbonate in 100 parts water. The high temperature is combated by wrapping the child from head to feet in a sheet wrung out of cold water (not room temperature) and covering with a blanket. After from ten to fifteen minutes another sheet is applied in the same way, repeating the procedure about five times. In case of collapse the child must be artificially warmed, even putting it in an incubator if necessary. After the infant has recuperated from the tendency to collapse, feeding should begin again, but without any fat in the food. Breast milk is liable to contain too much fat, and the child may relapse if placed at the breast, the collapse being fatal in this case. Salge has had excellent results from the use of human milk from which the fat has been removed. This is possible only when an abundance of human milk is at disposal, but it has saved many infants in his experience who otherwise would have been doomed. When human milk with fat removed can not be obtained, the tea should be continued for days and the breast milk should be drawn and given by the teaspoonful, in small amounts, not more than 50 c.c. the first days and increasing this amount very slowly and cautiously. The result is not so certain as when skimmed breast milk can be given. If no breast milk is available the tea diet should be continued for two or three days and then thin flour gruel or whey added. Milk should be resumed very cautiously, and buttermilk and diluted milk made with some preparation of malt should be given during convalescence. Cholera infantum is merely a severe form of intestinal catarrh and the indications are the same. Nephritis is the principal complication to be feared.

## Centralblatt für Chirurgie, Leipsic.

*Last indexed page 745.*

71 (XXXII, No. 32, Aug. 12.) *Subcutane Verlagerung des Omentum (displacement). A. Narath.
72 (No. 33.) *Ueber die Behandlung der chirurgischen Infektionen mit Phenol-Kampher. V. Chlumsky.
73 Zur Technik der seitlichen Entero-Anastomose (side to side). Küster.
74 (No. 34.) *Beitrag zur Wanderlappen-Plastik (traveling flaps). W. Hagen.
75 (No. 35.) Zur Pathologie des Prolapsus ani et recti und seine operative Behandlung durch Beckenboden Plastik (plastic reproduction of solid floor of pelvis). C. Hofmann.
76 (No. 36.) Zur operativen Behandlung des Genu recurvatum. C. Deutschländer.

71. **Subcutaneous Omentopexy.**—Narath thinks that all the advantages of the Talma operation can be secured by merely drawing up a piece of the omentum and fastening it in a subcutaneous pocket. His experience has shown that this answers perfectly the purpose of inducing extensive anastomoses and thus relieving the ascites. He incises above the umbilicus on the median line under Schleich local anesthesia. The ascitic fluid is evacuated, its escape from the deep-lying parts being insured by suction through metal catheters in rubber tubes inserted into the small pelvis and in the hypochondrium and lumbar regions. The greater omentum is seized and a thick tuft pulled out of the wound, but without altering the position of or pulling on the transverse colon. A part should be chosen containing as many blood vessels as possible, and it should be the thickness of one or two finger breadths. The incision should then be sutured to allow space only for the tuft of omentum without compression. This portion of the omentum is then sutured to the parietal peritoneum and linea alba, avoiding the veins. A pocket in the subcutaneous tissue

is then hollowed out, and the tuft of omentum—from 10 to 15 cm. long—is laid in this hollow. No further fixation is required. The results have been eminently satisfactory. The omentum is thus transplanted into a region particularly rich in blood vessels, and by the increased intra-abdominal pressure the blood is forced at once from the omentum into the developing anastomoses, as can be easily seen on inspection.

72. **Carbolic Acid and Camphor in Treatment of Infected Wounds.**—Chlumsky is enthusiastic over the fine results obtained in the treatment of infected wounds with a mixture of pure carbolic acid and camphor. The camphor seems to neutralize the caustic action of the carbolic acid so that the mixture feels like mere oil or chloroform when poured on the hand. His formula is: Carbolic acid 30 parts, camphor 60 parts, and alcohol to make 100. He has been using this mixture for six years in treatment of surgical infections, erysipelas, phlegmons, tuberculous fistulas, furuncles, etc. He evacuates the pus and pours the mixture into the cavity, as much as 30 to 50 gm. in a deep abscess, without any disagreeable by-effects. Infected wounds are rinsed with the mixture, and a tampon saturated with it is laid in the wound until suppuration is diminishing, when the mixture is poured in. In erysipelas the affected area and the surrounding skin are swabbed with the mixture from two to five times a day. Old patches are surrounded by a bank of cotton saturated with the mixture and covered with oiled silk or waxed paper. In recent cases the redness subsides and the trouble is aborted in a few hours. The mixture keeps perfectly if evaporation of the camphor is prevented.

74. **Flaps for Repair of Defects in Skin.**—Hagen describes two cases in which he covered a large defect with a flap from the same limb far above. The outer end of the pedunculated flap was turned over and sutured in the upper part of the defect below. The raw surface of the flap was thus turned upward, except at the end where it had been sutured in place in the defect. A roll of gauze under the arch formed by the flap kept it from falling and oiled silk on the raw surface kept it from drying up. In six days the sutured end had healed in place and the base of the flap was gradually divided and brought down to complete the covering of the defect below by the fourteenth day. In less than a month it had healed completely in place, the only trace of the defect being a linear scar around the edges of the transplanted flap.

### Deutsche medizinische Wochenschrift, Leipsic.

77 (XXXI, No. 37, September 14.) *Die Dauererfolge der operativen Behandlung des Krebses (remote results of cancer operations). J. Dollinger.
78 Ueber infantilen Kernschwund (defect in nucleus). N. Gierlich.
79 *Zur Kenntnis des idiopathischen Oedems des Säuglings (in infant). L. F. Meyer.
80 Ueber den Spirochätennachweis bei Syphilis. W. Scholtz. Id. C. Grouven and H. Fabry.
81 Relations Between Aggressive Action and Body Substance of Bacteria.—Ueber den Zusammenhang zwischen Aggressivität und Leibessubtantz von Bakterien. O. Bail.
82 *Photo-Salve Treatment. — Lichtsalbenbehandlung mittels Wärmestrahlung. Axmann.
83 Ueber Balneotherapie bei Nervenleiden (in nervous affections). B. Laquer (Wiesbaden).

77. **Remote Results of Cancer Operations at Budapest.**—Dollinger's statistics embrace 193 cases of cancer with 33 operations for recurrence. Of this number the remote results are known after three years in 150 patients and 40 per cent. have been free from recurrence. The history of 80 patients is known for five years, and of this number 41.23 per cent. have been free from recurrence. The results will be better in the next decade, as the technic of operations for cancer is being constantly improved.

79. **Treatment of Idiopathic Edema.**—Meyer's diagrams and clinical histories demonstrate the great importance of restricting the intake of salt in the food when an infant shows indications of idiopathic edema. Artificial foods should be avoided as they generally contain more or less salt. He relates the results of tests and the great influence on the elimination of urine during these periods in which salt, sodium phosphate or distilled water were given.

82. **Photo-Salve Treatment.**—Axmann reports favorable results in various cutaneous affections from the use of a salve applied to the parts which were then exposed to heat rays from an electric light or in an electric-light bath. The composition of the salve rendered it impermeable to the active rays, but its therapeutic action was unmistakably promoted by the heat.

### Münchener med. Wochenschrift, Munich.

84 (LII, No. 35, Aug. 29.) Specific Antibodies in Tape Worm Hosts.—Zur Frage der Bildung spezifischer Antikörper im Organismus von Bandwurmwirten. J. Langer.
85 Typhusbazillus und Bazillus fæcalis alcaligenes, 2 nicht verwandte Spezies. R. Trommsdorff.
86 Ueber die Anwesenheit der Spirochæte pallida in sekundärsyphilitischen Manifestationen und über die zu ihrem Nachweis angewendeten Färbungsmethoden (stains). I. Bandi and Fr. Simonelli.
87 *Permeability of Tubes for Injected Fluids.—Ueber die Durchgängigkeit der Tuben für in den Uterus injizierte Flüssigkeiten. F. Buttenberg.
88 *Treatment of Nervous Subjects in the Mountains.—Ueber die Behandlung von Vervösen im Hochgebirge mit besonderer Berücksichtigung von Davos. F. Jessen.
89 Ueber leichte Formen der Holzphlegmone (woody phlegmon). Fichtner.
90 Ueber Krebsbildung (cancer formation). W. Fuchs.
91 Fall von Abknickung der Speiseröhre durch vertebrale ekchondrose (kinking of esophagus).. H. Zahn.
92 (No. 36.) *Catalytic Influencing of Oxidation of Sugar.—Ueber dia katalytische Beeinflussung der Zuckerverbrennung. H. Shade.
93 Ueber Coxa valga. Th. Kölliker.
94 *Ultra-violet Light Treatment of Wounds.—Wundbehandlung mittelst ultra violetten Lichtes. Axmann.
95 *Das Karzinom der Mamma. Schinzinger.
96 Rebellischer Pylorospasmus; Gastroenterostomie; Heilung. Schüssler.
97 Necessity for Constant Weighing in Antifat and Forced Feeding Cures.—Notwendigkeit der Bestimmung des spezifischen Körpergewichtes bei Mast- und Entfettungskuren. J. Wengler.
98 *Schleimsekretion des Darms (mucus secretion in intestines). R. E. Schütz. (Commenced in No. 35.)
99 Ueber Meningitis cerebrospinalis epidemica (Weichselbaumsche Meningitis.) H. Schottmüller. (Concluded).

87. **Permeability of Tubes for Injected Fluids.**—Buttenberg's experiments on 27 cadavers showed that the tubes are permeable in the majority of cases, but that only a small amount of the injected fluid can pass through them. He advises the use of a reliable two-way catheter, and that the injection should be made with a pressure corresponding to a height of less than a meter. Very poisonous disinfectants, such as corrosive sublimate, should not be used for uterine injections. It is not enough to rinse the catheter and tubes in the disinfectant. They should be allowed to stand in them as long as possible, while other preparations are being made, hands disinfected, etc., and should be rinsed out with boiling water to warm them just before use. The presence of inflammation should contraindicate the use of caustics and strong poisons.

88. **Treatment of Neurasthenics and Neurotics in the Mountains.**—Jessen practices at Davos, in Switzerland, and states that the air of the mountains there contains so much radioactivity that he was able to collect sufficient to inhibit the growth of the *Staphylococcus aureus* and the *B. prodigiosus*. He presents an array of arguments to show that the stimulating effect of a mountain climate is particularly beneficial in certain purely functional nervous affections, results being attained which are not realized anywhere else. Brilliant results are obtained in acquired neurasthenia, in nervous stomach disturbances, hyperacidity and cardiac neuroses. Affections with an organic basis are not adapted for this mountain cure, but latent pulmonary tuberculosis frequently hides under the picture of neurasthenia. The depression, abnormal irritability, hyperacid disturbances and cardiac neuroses of the heart may be the only evidences of the insidious lung process for which the mountain climate is especially adapted. Fine results are also obtainable in diabetes, exophthalmic goiter, asthma, chlorosis, etc. The only requisite is that the patients are still capable of responding to stimuli. He quotes the remark made by certain persons that they never lie down in bed at Davos without a shudder at the possible danger of tuberculosis contagion, and presents evidence to prove that the prophylactic measures and disinfection carried on there to such perfection render the town much safer from tuberculosis contagion than any large city. The mortality from tuberculosis among the natives is far less than it was before the place became a health resort.

92. **Catalytic Influencing of Oxidation of Sugar.**—In this second communication Schade discusses the catalysis of sugar

combustion in the economy of organic nature. He surmised that the blood—as the intermediate agent of the oxidation effects—besides the rôle of transporting the oxygen, also plays a part in promoting the receptivity of the intraorganic sugar so that it takes up with greater avidity the oxygen brought by the blood. This assumption has been confirmed by his discovery that a single drop of human blood, or mere traces, placed on a lump of ordinary cane sugar, even before it is dry, renders it highly combustible. If the sugar is then held in an alcohol flame it lights at once and burns furiously, sometimes even explosively. Grape sugar behaves in the same way, but not with such intensity. The oxidability of the sugar is materially enhanced by contact with the blood. Further tests showed that other substances have this same power of catalytic influencing of sugar. If a lump of sugar is dipped in cigar ashes or brought into contact with the kernels of fruit or grains or similar vegetable product, coffee, tea, pepper, cocoa, etc., it burns with great energy when touched with a lighted match. All these substances are good catalyzers. Their catalyzing property is not affected by cooking and differs in other respects from that of the oxydases. He, therefore, proposes for this group the term "oxydators." He thinks that his researches promise to reveal the *modus operandi* of the action of ferments. He has succeeded in tracing the oxygen-transporting components of hemoglobin through the various steps of the decomposition products to the terminal stage of the metallic iron. Not only hemoglobin, but also its hematin, its ash, its iron salts and the pure metallic iron have all demonstrated their capacity for transporting oxygen. The organic envelope as a condition *sine qua non* for the catalysis of hemoglobin and of the glycolytic enzymes has been done away with by these researches. They have shown that part of the specific ferment activity can be accomplished by their simplest inorganic elements as a catalytic effect.

94. **Ultra-Violet Rays in Therapeutics.**—Axmann thinks that the ultraviolet rays have marked chemical action, and that these alone can be utilized for therapeutic purposes. The advantages derived from red glass, blue glass, etc., are due to the fact that they change the rays passing through them into chemically active short wave rays. He reports his experience with lamps made to produce these rays alone. It has been extremely favorable in alopecia, chronic eczema, acne, sycosis, erysipelas and in cases of suppurating wounds. He noticed that venous blood after long exposure to the air turned a bright red when brought near the ultraviolet rays from his lamp. The coagulation of the blood was also accelerated. He explains these phenomena as due to the nascent ozone, and states that fresh and suppurating wounds behave under the rays as if they had been swabbed with hydrogen dioxid. He has thus treated 10 patients with ulcers on the feet of from six weeks' to three years' duration. The exposures were half an hour in length, and the ulcers all healed in four weeks at farthest, from three to eight exposures being made. In one of the recent cases the ulcer healed under the physician's eyes in two exposures. The chemical action of the rays may be enhanced, he thinks, by sensitizing the tissues with some chemical. He is now experimenting with chlorin. Chemical processes are the forces at work and bearers of the energy.

95. **Castration in Cases of Mammary Cancer.**—Schinzinger states that he proposed, in 1889, the advisability of castration in case of cancer of the breast. Cancer seems to be more malignant in young women, and his idea was that castration would hasten the atrophy of the mammary glands and thus reduce the extra malignity of the neoplasm. He reviews the literature on the subject, but has had no opportunity to carry his idea into execution. He would not restrict it to inoperable cases, but would castrate on the first discovery of cancer. Out of his 80 cases of mammary cancer since 1889 three were in men. Two of the men had sisters or a daughter with carcinoma of the breast, neck or abdomen.

98. **Intestinal Mucus Secretion.**—Schütz concludes his article with the statement that purely neurogenic mucous hypersecretion is of rare occurrence. It can be assumed when the excessive secretion occurs spasmodically, the amounts being moderate or minimal during the interval, and when the hypersecretion is accompanied by nervous symptoms or appears after nervous excitement. As a rule, however, there is always some catarrhal condition underlying the apparently purely nervous affection.

## Books Received

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By H. Sahli. Edited with additions by F. P. Kinnicutt, M.D., and N. B. Potter, M.D. Authorized Translation from the Fourth Revised and Enlarged German Edition. Cloth. Pp. 1008. Price, $6.50 net. Philadelphia: W. B. Saunders & Co., 1905.

OFFICIAL REGISTER AND DIRECTORY OF PHYSICIANS AND SURGEONS in the State of California, to which is added a Directory of Physicians and Surgeons of Oregon and Washington. Revised and Published by the Medical Society of the State of California, November, 1905. Cloth. Pp. 374.

THE ACCESSORY SINUSES OF THE NOSE and Their Relations to Neighboring Parts. Illustrated by Fifteen Colored Plates by G. Killian. Translated by R. Patterson, M.D., M.R.C.P., Atlas. Price, $7.50 net. Chicago: W. T. Keener & Co.

CLINICAL METHODS. A Guide to the Practical Study of Medicine. By R. Hutchison, M.D., F.R.C.P., and H. Rainy, M.A., F.R.C.P. Ninth Edition. Cloth. Pp. 634. Price, $2.50 net. Chicago: W. T. Keener & Co., 1905.

TRANSACTIONS OF THE TWENTY-SEVENTH ANNUAL MEETING of the American Laryngological Association held at Atlantic City, N. J., June 1-3, 1905. Cloth. Pp. 360. New York: Published by the Association, 1905.

TREATMENT OF DISEASES OF THE EYE. By V. Hanke. Translated by J. H. Parsons, B.S., D.Sc., F.R.C.S., and G. Coates, M.D., F.R.C.S. Cloth. Pp. 222. Price, $1.25 net. Chicago: W. T. Keener & Co., 1905.

INDIGESTION, The Diagnosis and Treatment of the Functional Derangements of the Stomach by G. Herschell, M.D. Third Edition. Cloth. Pp. 293. Price, $1.50 net. Chicago: W. T. Keener & Co., 1905.

SURGICAL ASPECTS OF DIGESTIVE DISORDERS. By J. G. Mumford, M.D., in Association with A. K. Stone, M.D. Cloth. Pp. 395. Price, $2.50. New York: The MacMillan Co., 1905.

A MANUAL OF CHEMISTRY, INORGANIC AND ORGANIC. By A. P. Luff and F. J. M. Page. Illustrated. Third Edition. Cloth. Pp. 555. Price $1.75 net. Chicago: W. T. Keener & Co.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. xvii. For the Year 1904. Cloth. Pp. 277. New York: Rooney & Otten Printing Co., 1905.

IMMUNITY IN INFECTIVE DISEASES. By E. Metchnikoff. Translated from the French by F. G. Binnie. Cloth. Pp. 591. Price, $5.25. New York: The MacMillan Co., 1905.

DISSECTING MANUAL, Based on Cunningham's Anatomy. By W. H. Rockwell, Jr., M.D. Flexible Cover. Pp. 306. Price, $2.00 net. New York: William Wood & Co.

HYGIENE AND PUBLIC HEALTH. By B. A. Whitelegge, C.B., and G. Newman. Illustrated. Cloth. Pp. 636. Price, $1.75 net. Chicago: W. T. Keener & Co., 1905.

TRANSACTIONS OF THE MEDICAL SOCIETY of the State of New York, for the Year 1905. Cloth. Pp. 450. Published by the Society, 1905.

METHODS OF ORGANIC ANALYSIS. By H. C. Sherman, Ph.D. Cloth. Pp. 245. Price, $1.75. New York: The MacMillan Co., 1905.

LABORATORY MANUAL OF PHYSIOLOGY. By F. C. Busch, B.S., M.D. Illustrated. Flexible Cover. Pp. 206. Price, $1.25 net. New York: William Wood & Co.

THE PANAMA CANAL, SYSTEM AND PROJECTS, of L. W. Bates. Cloth. Pp. 178, with Illustrations. Denver, Colorado.

## NEW PATENTS.

Recent Patents of Interest to Physicians:

800467 Elastic bandage. Henry Myers, Philadelphia.
800487. Inhaler. Jerome Rich, Jackson, Mich.
800489. Electrical vibrating and massaging device. Louis E. Richmond and C. J. Graham, Cleveland, Ohio.
800595 Electrical vibrator for massaging purposes. Louis E. Richmond and C. J. Graham, Cleveland, Ohio.
800407. Truss. Francisco Serio, New York.
801180. Cabinet for transformers used in x-ray apparatus. Monroe S. Clawson, New York.
801019. Fountain syringe. Charles J. Kintner, New York.
800925. Purifying viscin. Willy Loebell, Klein-Zschachwitz, near Dresden, Germany.
801028. Making plasters, etc. Willy Loebell, Klein-Zschachwitz, near Dresden, Germany.
800676. Combined telephone receiver and aural-massage instrument. Hermann G. Pape, New York.
801117. Invalid bed. Marguerite D. Stow, Caldwell, N. J.
801352. Maternity drawers. Nina W. Anderson, Macon, Ga.
801681. Clinical thermometer. Charles Nurnberg, New York.
801477. Door-operated air-pump for atomizers. Wm. H. Rose, Baltimore.
801693. Pasteurizer. Wm. J. Ruff, Quincy, Ill.
801745. Massage apparatus for improving the hearing. Eugene W. Schneider, New York.
801555. Inhaler. David L. Sprague, Clear Lake, Iowa.
801556. Truss. James K. Stockton, New York.
801865. Obstetrical and invalid bed. John Hall and H. A. Paddleford, North Monroe, N. H.
802190. Emergency bandage for surgical purposes. S. E. Heineman, Detroit.
802233. Curative apparatus. Wm. J. O'Donnell, Rochester, N. Y.
801912. Syringe. Gustave Behmann, Newark, N. J.
801924. Syringe nozzle. Sylvester R. Shiley, Reading, Pa.
802339. Inhaler. A. de Trey, Philadelphia.